

CHEMOSPHERE

SUBJECT AND AUTHOR INDEX

Volume 26, 1993



Pergamon Press: Oxford New York Seoul Tokyo

EDITOR-IN-CHIEF (and Editor of Chemistry and Biochemistry)

Professor O. Hutzinger

University of Bayreuth, Chair of Ecological Chemistry and Geochemistry, Postfach
10 12 51, W-8580 Bayreuth, Germany
Fax: XX 49 921 54626

ASSISTANT EDITOR: Alfreda Hutzinger

EXECUTIVE EDITOR

Dr T. Stephen

8 Lewis Close, Risinghurst, Headington, Oxford OX3 8JD, U.K.

PRODUCTION EDITOR: Wendy Lawson

Pergamon Press Ltd, Headington Hill Hall, Oxford OX3 0BW, U.K.

EDITORS

CHEMISTRY AND BIOCHEMISTRY

Mr D. W. Kuehl

U.S. Environmental Protection Agency, Duluth, MN 55804,
U.S.A.
Fax: XX 218 720 5539

ECOTOXICOLOGY

Professor Dr J. P. Giesy

Department of Fisheries and Wildlife, Michigan State
University, MI 48824-1222, U.S.A.
Fax: XX 517 336 1699

Professor W. Klein

Fraunhofer-Institut für Umweltchemie und Ökotoxikologie,
Grafschaft/Hochsauerland, W-5948 Schmallenberg, Germany
Fax: XX 49 2972 30 2319

Dr M. Yasuno

National Institute for Environmental Studies, Japan Environment
Agency, 16-2 Onogawa, Tsukuba, Ibaraki 305, Japan
Fax: XX 298 51 4732

TOXICOLOGY, PHARMACOKINETICS AND EPIDEMIOLOGY

Professor U. G. Ahlborg

Karolinska Institutet, Institute of Environmental Medicine, Unit
of Toxicology, Box 60208, S-10401 Stockholm, Sweden
Fax: XX 46 8 34 3849

Professor S. Safe

Veterinary Physiology and Pharmacology, Texas A and M
University, College Station, TX 77843, U.S.A.
Fax: XX 409 845 6544

Professor E. Takabatake

Setsunan University, Faculty of Pharmaceutical Sciences, 45-1
Nagaotoge-cho, Hirakata, Osaka 573-01, Japan
Fax: XX 720 50 7020

ATMOSPHERIC CHEMISTRY AND GLOBAL CHANGE

Dr M. A. K. Khalil

Global Change Research Center and Department of Environmental
Science and Engineering, Oregon Graduate Institute of
Science and Technology, 19600 Von Neumann Drive, Beaverton,
OR 97006-1999, U.S.A.
Fax: XX 503 690 1016

EDITORIAL BOARD

CHEMISTRY AND BIOCHEMISTRY

J. Albaiges, CID-CSIC, Barcelona, Spain

K. Ballschmiter, Universität Ulm, Ulm, Germany

T. F. Bidleman, ARQP, Ontario, Canada

R. E. Clement, Ontario Ministry of the Environment, Rexdale,
Canada

D. W. Connell, Griffith University, Brisbane, Australia

H. Fiedler, University of Bayreuth, Bayreuth, Germany

W. Giger, Swiss Federal Institute of Technology, Dubendorf,
Switzerland

H. P. Hagenmaier, University of Tübingen, Tübingen, Germany

F. Hileman, Monsanto BBAM, St Louis, MO, U.S.A.

R. A. Hites, Indiana University, Bloomington, IN, U.S.A.

P. M. Huang, University of Saskatchewan, Saskatoon, Canada

R. C. Lao, Environment Canada, Ottawa, Canada

D. Lenoir, GSF Institut für Ökologische Chemie, Neuherberg,
Germany

D. Mackay, University of Toronto, Toronto, Canada

A. A. Moghissi, PO Box 7166, Alexandria, VA, U.S.A.

H. Parlar, Gesamthochschule Kassel-Universität, Kassel,
Germany

C. Rappe, University of Umeå, Umeå, Sweden

A. Sabljic, Institute Rudjer Bošković, Zagreb, Croatia

H. R. Schulter, Fachhochschule Fresenius, Wiesbaden,
Germany

P. R. Wallnöfer, Bayerische Landesanstalt für Ernährung,
Munich, Germany

V. Zitko, Biological Station, St Andrews, Canada

ECOTOXICOLOGY

S. M. Bartell, Sees Oak Ridge Inc., Oak Ridge, TN, U.S.A.

G. C. Butler, 4694 West 13th Avenue, Vancouver, Canada

D. Calamari, Università degli Studi di Milano, Milan, Italy

R. T. Di Giulio, Duke University, Durham, NC, U.S.A.

W. Ernst, Alfred-Wegener-Institut für Polar- und Meeresfor-

schung, Bremerhaven, Germany

M. Goto, Gakushuin University, Tokyo, Japan

P. C. Kearney, National Resources Institute, Beltsville, MD,
U.S.A.

S. J. Klaine, Memphis State University, Memphis, TN, U.S.A.

P. F. Landrum, Great Lakes Environmental Research Laboratory,
Ann Arbor, MI, U.S.A.

R. Nagel, Johanne Gutenberg-Universität Mainz, Mainz,
Germany

F. Schmidt-Bleek, OECD 2, Paris, France

A. Spacie, Purdue University, West Lafayette, IN, U.S.A.

R. Truhaut, Université de Paris, Paris, France

TOXICOLOGY, PHARMACOKINETICS AND EPIDEMIOLOGY

R. Kociba, Dow Chemical Company, Midland, MI, U.S.A.

Y. Masuda, Daiichi College of Pharmaceutical Sciences,
Fukuoka, Japan

W. Mücke, Technical University of Munich, Munich, Germany

H. Nakazawa, Institute of Public Health, Tokyo, Japan

Ch. Schlatter, University of Zurich, Schwerzenbach, Switzerland

R. R. Suskind, University of Cincinnati, Cincinnati, OH, U.S.A.

ATMOSPHERIC CHEMISTRY AND GLOBAL CHANGE

V. P. Aneja, North Carolina State University, Raleigh, NC,
U.S.A.

P. Brimblecombe, University of East Anglia, Norwich, U.K.

C. I. Davidson, Carnegie Mellon University, Pittsburgh, PA,
U.S.A.

R. Harriss, University of New Hampshire, Durham, NH, U.S.A.

V. W. J. H. Kirchnhoff, Instituto Nacional de Pesquisas Espaciais
(INPE), São José dos Campos, S.P., Brazil

H. Papen, Fraunhofer Institute for Atmospheric Environmental
Research, Garmisch-Partenkirchen, Germany

D. C. Parashar, National Physical Laboratory, New Delhi, India

S. A. Penkett, University of East Anglia, Norwich, U.K.

R. A. Rasmussen, Oregon Graduate Institute, Beaverton, OR,
U.S.A.

W. Seiler, Fraunhofer Institute for Atmospheric Environmental
Research, Garmisch-Partenkirchen, Germany

J. W. Winchester, Florida State University, Tallahassee, FL,
U.S.A.

SUBJECT INDEX VOL. 26, 1993

- ABIOGENIC** methane, unaccounted-for sources 507
- ABIOTIC REACTIONS** intermediate, bacterial metabolism phytol in sea water 1513 methylation Hg, possible pathways, aquatic environment 2063
- ACCUMULATION** excretion, chloroanilines by *Cyprinus carpio* 2301 phenylbenzoylurea insecticides, *Scenedesmus subspicatus* 955
- ACID** precipitation, hardwood forest ecosystem relation to methane flux 721
- ACINETOBACTER**, aerobic metabolism phytol in sea water, temp dependent abiotic intermediate 1513
- ACTIVITY COEFS** aqueous solubility organic compds 1239
- ADSORPTION** chromate on hydrous iron oxide, chemical, spectroscopic evidence 1897 coell, soil and sediment, bioconcentration fish, interfacial tension with water, nonelectrolytes, linear solvation energy relationship 1905
- PAHs on silica, phototransformation aqueous medium hydrophobic pollutants 1617
- AERATED SOILS**, methane uptake, soil texture parametrization 697
- AEROBIC REACTIONS** degradation, n-alkanes in heavy oil pure culture *Pseudomonas* sp 1151 zone, methane production landfills former USSR 401
- AEROSOL**, indoor space spraying, simulation of insecticides 1167
- AGE**, body-mass-index adults children impact on blood PCDD/PCDF concentration 1109
- AGRICULTURE** effect land use changes, forest, grassland soils on methane oxidation 675 workers, ethion, saliva quantification 897
- AIR** aerosol indoor space spraying, simulation of insecticides 1167 aldrin photoepoxidation with α -diketones 921
- ambient, detn semivolatile organic compds, sampling system, analytical method 2255
- PCDF-PCDD ambient levels, Germany 851 sampling, analysis, indoor permanent elastic sealants 871
- UK urban, PCBs, PAHs 2185
- ALCOHOLS**, cytotoxicity and octanol/water part coeffs, goldfish GFS cells 1015
- ALDRIN**, photoepoxidation in air with α -diketones 921
- ALKANES**, in heavy oil, aerobic degradation pure culture *Pseudomonas* sp 1151
- ALKYLPHENOLS**, alkylphenol polyethoxylates, aqueous solubilities 1461
- ANAEROBIC REACTIONS** biodegradability, assessment, integrated test strategy, wastewater 2241 waste stabilization, methane emission, pond study 633 zone, methane production, landfills, former USSR 401
- ANALYSIS** air indoor permanent elastic sealants 871 cause-and-effect, carbon monoxide, methane and ozone photoreactions global troposphere 657 dioxins, furans fish tissues, interlaboratory evaluation 1679 headspace, chlorophenols, chlorobenzenes in leachate 1355 method, detn semivolatile organic compds ambient air 2255 organophosphate nerve agent, soil 2023 semi-automated, non-ortho PCBs, application arctic marine mammal tissues 1981
- ANAOONTA ANATINA** cadmium uptake, compartmental time characteristics 1479
- ANGUILLA ANGUILLA** PCDDs/PCDFs/non-ortho- and mono-ortho substit chlorobiphenyls, toxicity 1823
- UK freshwater reedbeds, organochlorine pesticide residues and PCBs in *Anguilla anguilla* 2289
- ANIMALS**, farm ruminants, effect of diet on carbon dioxide, methane emissions 87
- ANTHRACENE**, adsorbed on silica, phototransformation aqueous medium 1617
- ANTHROPOGENY** carbon dioxide, methane, pre-industrial emissions origin and magnitude 69 methane emission, rice areas sources 507
- AQUATIC ENVIRONMENT**, see Environment
- AQUATIC ORGANISMS** see Organisms
- ARCTIC CIRCLE** coring, methane permafrost results 609 ecosystems, methane release Carex-dominated wetlands, effect plant stomatal control 339 permafrost methane content 591, 595 tundra, effect of environmental and biotic controls on methane flux 357
- AROCOLORS**, environmental samples, detn mono- and non- α,β -chlorine substit PCBs 1443
- AROMATICS**, cytotoxicity and octanol/water part coeffs, goldfish GFS cells 1015
- ARTIFACTS**, GC/MS identification, USEPA methods 625, 8270, sample preparations 1743
- ASBESTOS**, source, yard, sludge composts, time-of-waste collection function 1537
- ASH**, combustion of wood treated with inorganic preservatives, element composition and leaching 2121
- ASIA**, methane emission rice areas 219, 239
- ATMOSPHERE** concentration southern hemisphere methane, carbon isotopes 95 diffusion limits, consumption methane by soil 715 greenhouse, next century, ozone content and composition changes 777 methane emission coal related sources 419 decreasing trend, unpredictability of future concentrations 803 effect on climate 739

- from termites 617
 global, landfills, coalmines, natural gas 441
 global, USSR sources 111
 highly populated areas, regional budget 143
 inventory, review and synthesis 507
 oceanic flux, uncertainties, long-term variation 579
 rice paddies, possible mitigation 201
 sources, deuteromethane as finger prints 45
- ATRAZINE**
 detection, water samples, enzyme immunoassay techniques 2173
 groundwater pollution, fugacity model 929
 soil pollution potential 1329
- B**
- BACTERIA**
 aerobic metabolism phytol in sea water,temp dependent abiotic intermediate 1513
 methylotrophic, detection, natural samples, molecular probing techniques 1
- BENZANTHACENE**, adsorbed on silica, phototransformation aqueous medium 1617
- BIOACCUMULATION**, toxic and nutrient elements, soft tissue composition *Dreissena polymorpha* 1559
- BIOASSAYS**
 dielectric fluids, detection dioxin like activity epithelial cell culture 1225
 feeding activity measurement *Gammarus pulex* 1375
 H4IE, derived 2,3,7,8-TCDD equivalents, biomagnification 1203
- BIOCONCENTRATIONS**
 factors, *Cyprinus carpio*, chlороanilines 2301
 nonelectrolytes, fish, soil and sediments adsorption coeff, interfacial tension with water, linear solvation energy relationships 1905
- BIODEGRADABILITY**, anaerobic, assessment, integrated test strategy, wastewaters 2241
- BIODEGRADATION**, morpholine and degradation wastewater treatment 1729
- BIOMASS**, fossil fuel combustion greenhouse gas emission 479
- BIOREMEDIATION**, contaminated soil with phytotoxicity tests 1365
- BIOSLUDGE**, see Sludge
- BIPHENYLS**, reactions involving $[O_2]^{(1)}_{\Delta}$ 1691
- BLOOD**
 PCDD/PCDF concentration adults children, impact body-mass-index and age 1109
 protein uptake distribution lipotrophic xenobiotics by fish, linear systems analysis 1031
- BODY-MASS-INDEX**, age, adults children impact on blood PCDD/PCDF concentration 1109
- BOILING** points, critical evaluation, principle, example 1579
- BONES**, *Salmo trutta*, strontium-90 analysis 2031
- BORON**, integrated assessment biological effects *Oncorhynchus mykiss* 1383
- C**
- CADMUM**
 accumulation organs *Cyprinus carpio* 945
 active, passive uptake gills *Carcinus maenas* 2209
 aquatic organisms, microcontaminant concentrations Rhine delta 817
 uptake, compartmental time characteristics, *Anaodonta anatina* 1479
- CALCULATIONS**, rate consts gas-phase OH radicals degradation organic compds via molecular orbital calculations 1273
- CARBETAMIDE**, photoproducts, photodegradation 1917
- CARBON**
 cycle, effect of landfill methane rates, fates 369
 dioxide emissions anthropogenic, origin and magnitude 69
 farm animals, effect of diet 87 monoxide
 in OH chemistry, feedbacks and reservoirs from reactive products 641
 plus other active gases global warming potential 731
- CARBONATE** minerals, uranium sorption 1753
- CARCINOGENS**, levels bulk reagents, herbicides 2161
- CARCRINUS maenas**, gills, Cd active, passive uptake 2209
- CAREX** dominated wetlands, effect plant stomatal control on methane release 339
- CARROTS** see Plants
- CATALYSTS**
 oxidizing decomposition PCDD s/PCDFs, NO_x odourous compds from incineration 2167
 titanium oxide photodecomposition PCBs aqueous systems 1213
- CATTLE**, manure, methane emissions 189
- CBS**
 hexachlorobenzene, microcontaminant concentrations Rhine delta 817
 non-ortho and mono-ortho substit, toxicity, fish and shellfish, Netherlands 1823
- CELL** cultures, epithelial, bioassays dielectric fluids, detection dioxin like activity 1225
- CHEMICALS**
 classification, exposure, ecotoxic and toxic effects 1653
 German program, status report on testing activities 1789
- CLIMATE**
 changes, arctic permafrost content 591, 595
 effects atmospheric methane 739
 greenhouse warming potential methane and other active gases 731
 nitrogen oxides NMHC emissions
- Photobacterium phosphoreum** 1971
- CHINA**, methane sources, historical and current emissions 127
- CHLORDANES**, chlorocymenes, chlorophenols, chloroetenes, hexachlorobenzene, HCH, PCB, PCDD, PCDF, TOCl, EOCl, pulp mills, lake sediments 2147
- CHLORINATION** gas-phase, naphthalene 2139
- CHLOROANILINES** accumulation, excretion, *Cyprinus carpio* 2301
- CHLOROBENZENES**
 exhaust gas, waste incinerators monitoring system 1071
 toxicity *Eisenia andrei* different exposures 2265
- CHLOROBIPHENYLS** see CBs
- CHLOROBORNANES** including symmetrical aspects in toxaphene 1079
- CHLOROETHANES** boiling points, database 1579
- CHLOROFLUOROCARBONS** disposal, solid waste incinerators decomorganohalogen compds 2129
- CHLOROHYDROCARBONS** emission, relationship to PVC incineration 2039
- CHLOROPHENOLS**
 chlorobenzenes in leachate, headspace analysis 1355
 photodegradation to CO₂ and HCl using high surface area titanium dioxide anodes 1301
- CHLORPYRIFOS**, aqueous concentrations, uptake, elimination *Poecilia reticulata* 1607
- CHLOROVANILLINS** syringaldehydes, structure, GC separation 1843
- CHROMATE**, adsorption on hydrous iron oxide, chemical, spectoscopic evidence 1897
- CHROMATOGRAPHY**
 aromatic and environmental samples, detn mono- and non- α,α' -chlorine substit PCBs 1443
 column lattice-layer materials, dioxin methods 907
 gas, chlorinated vanillins, syringaldehydes 1843
 GC-ECD, PCBs, digested UK sewage sludges 2199
 GC/MS artifact identification, USEPA methods 625, 8270, sample preparations 1743
 trichloroacetic acid in pine needles, vicinity pulp mill 1859
- CHROMIUM**, tissues *Posidonia oceanica*, *Cymodocea nodosa* 963
- CLASSIFICATION**
 chemicals, exposure, ecotoxic and toxic effects 1653
 toxic substances, life-cycle assessment 1925
- CLIMATE**
 changes, arctic permafrost content 591, 595
 effects atmospheric methane 739
 greenhouse warming potential methane and other active gases 731
 nitrogen oxides NMHC emissions

- ozone OH global concentration model 787
- CLOPHEN**, effect on indoor air analysis, sampling 871
- COAL**
burning, methane emission 473
natural gas industry, methane emission 441
peat, fuel oil, hazardous waste combustion, fly ash induction cytochrome P450IA1 Hepa-1 1499 related sources, methane emission, methodology 419
- COALMINES**
global methane emissions 453
natural gas, landfills, global methane emissions program 447
surface, methane emissions, open path FTIR spectroscopy and modelling technique 23
- COMBUSTION**
biomass, fossil fuels, greenhouse gas emission 479
coal, methane emission 473
facilities, flue gas, long-term sampling PCDDs/PCDFs 2097
fly ash peat, coal, fuel oil, hazardous waste, induction cytochrome P450IA1 Hepa-1 1499
fly ash waste, coal, peat, fuel oil, cytochrome P450IA1 Hepa-1 induction 1499
wood treated with inorganic preservatives, element composition and leaching of ash 2121
- COMPOST**, waste, sewage sludge, asbestos source, time-of-waste collection function 1537
- COMPUTER** estimation, atmospheric gas-phase reaction rate of organic compds with OH radicals and ozone 2293
- CONTAMINANTS**, wet flux, lake Michigan 1767
- CONTROLS**
biotic, environmental, effect on methane flux arctic tundra 357
wetlands, review assessment methane emission 261
- COPPER**
concentration, fish, sediments, Tigris river 2055
slag, 'Kieselrot', organic, inorganic components 881
tissues *Posidonia oceanica*, *Cymodocea nodosa* 963
- COPTOTERMES ACINACIFORMI**
metabolism, comparative elimination, PCB congeners 1291
- CORRIGENDA**, T.G.Bma, J.D. Kilgroe: 25, 1381: errors corrected 1415
- COWS**, free-range, methane emission 179
- CYMODOCEA NODOSA** tissues, Cu, Cr, Ni 963
- CYPRINUS CARPIO**
accumulation, excretion chloroanilines 2301
organs, Cd accumulation 945
- CYTOCHROME**, P450IA1 Hepa-1, induction, fly ash peat, coal, fuel oil, 1499
- hazardous waste combustion 1499
- CYTOTOXICITY**, 109 chemicals goldfish GFS cells and octanol/water part coeffs 1015
- D**
- DDES**
contamination regional trends *Lutra lutra* 941
- DDTs**, PCBs in *Phoca vitulina*, interlab study 1099
- DDTs**, DDEs, PCBs in *Phoca vitulina*, interlab study 1099
occurrence, distribution, sources, St Lawrence river 1595
- DECONTAMINATION**, water, photocatalytic pentachlorophenol degradation 2103
- DEGRADATION**
aerobic, n-alkanes in heavy oil pure culture *Pseudomonas sp* 1151
 γ -HCH *Pseudomonas paucimobilis*, unstable intermediate, indirect identification 2279
 γ -HCH stereochemical analysis by *Pseudomonas paucimobilis* UT26 1187
morpholine wastewater treatment 1729
organic compds, molecular orbital calculations rate consts gas-phase OH radicals 1273
pentachlorophenol, photocatalytic water decontamination 2103
phenylbenzoylurea insecticides, *Scenedesmus subspicatus* 955
products lignin, humic substances 1823
- DEHYDROGENASE** activity, activated sludge not inhibited by morpholine 1729
- DETECTION**
dioxin like activity dielectric fluids by epithelial cell culture bioassay 1225
methylo trophic bacteria natural samples, molecular probing techniques 1
- DEUTEROMETHANES**, potential fingerprints, sources atmospheric methane 45
- DIALYSIS**, large-scale, lipids, semipermeable membrane device 1993
- DIAZEPAM**, plus solvent, effect on aquatic invertebrates 2007
- DICHLORO-2,5-CYCLOHEXADIENE-1,4-DIOL**, γ -HCH degradation product 1719
- DICHLOROANILINE**, toxicity *Perca fluviatilis*, comparison *brachydanio rerio* acute and early life stage exposure 1641
- DICHLOROHYDROQUINONE**, γ -HCH degradation product 1719
- DIELDRIN**, contamination regional trends *Lutra lutra* 941
- DIELECTRIC** fluids, detection dioxin like activity, epithelial cell culture bioassay 1225
- DIET**
effect on levels PCDD/PCDF, human milk 1889
- ruminant farm animals, effect on carbon dioxide, methane emissions 87
- DIFFUSION** limits, consumption atmospheric methane by soils 715
variability methane uptake aerated soil texture parametrization 697
- DIGOXIN**, plus solvent, effect on aquatic invertebrates 2007
- α -DIKETONES**, aldrin photooxidation in air 921
- DIOXINS**
analysis fish tissues, interlaboratory evaluation 1679
chromatography, column lattice-layer materials 907
distribution, behaviour, sampling strategy, vehicle fires in traffic tunnels 1159
embryotoxicity *Sterna forsteri*, lake Michigan 2079
global man exposure, industrial waste incineration 1491
like activity, detection dielectric fluids by epithelial cell culture bioassay 1225
- DREISSENA POLYMORPHA** soft tissue composition, bioaccumulation nutrient and toxic elements 1559
- DRINKING** water, Japan, daily intake PCDD/PCDF/non-ortho coplanar PCBs 1527
- E**
- ECOSYSTEMS**
biomagnification H4III assay, TCDD equivalents 1203
DDT, metabolites, concentration St Lawrence river 1595
hardwood forest, methane flux relation to acid precipitation 721
wet coastal tundra, effect soil moisture and thaw depth on methane flux 329
- ECOTOXICOLOGY**
classification of chemicals 1653
long-term studies, *in situ* pond mesocosms 1137
- EISENIA ANDREI** toxicity different exposures chlorobenzenes 2265
- [NON]ELECTROLYTES**, bioconcentration, fish, soil and sediments adsorption coeff, interfacial tension with water, linear solvation energy relationships 1905
- ELECTROSTATIC** precipitator, effect flue-gas concentrations PCDD, PCDF, PCB, PCBz, PAH 863
- ELEMENTS**, composition, ash from wood treated with inorganic preservatives 2121
- ELIMINATION**, phenylbenzoylurea insecticides, *Scenedesmus subspicatus* 955
- EMBRYOTOXICITY**, dioxin-like, *Sterna forsteri*, lake Michigan 2079
- EMISSION**, chlorinated hydrocarbons, relationship to PVC incineration 2039
- ENVIRONMENT**
applications UNIFAC model 1325
aqueous solubility, organic compds 1239
aquatic abiotic methylation Hg, possible pathways 2063

- biotic controls, effect on methane flux, arctic tundra 357
 Lit review PCDD/PCDFs 1041
 pesticide assessment, 91/414/EEC directive 979
 protectio investment, people richer 1003
 status report on testing activitiesexisting chemicals 1789
 Swedish, PBDE in biological samples 1703
ENZYMES, immunoassay techniques, atrazine detection, water samples 2173
EPOXIDATION, photo, aldrin in air with α -diketones 921
ETHION, human exposure, quantification saliva 897
EXCRETION, intake, PCDDs/PCDFs, different aged breast fed infants 1947
EXHAUST GAS waste incinerators, monitoring system, chlorinated benzenes 1071
EXPOSURE, classification of chemicals 1653
- F**
FEEDING, activity measurement *Gammarus pulex* 1375
FERTILIZATION, irrigation effect on methane emission rice paddies 239
FIRES, vehicles in traffic tunnels, distribution, behaviour dioxin like pollutants, sampling strategy 1159
FISH
 bioconcentration factors, adsorption coeff, soils sediments,interfacial tension with water, organic nonelectrolytes based on linear solvation energy 1905
 linear systems analysis, uptake, distribution, clearance lipophilic xenobiotics, role blood proteins 1031
 Tigris river, Zn, Cu concentrations 2055 tissue, interlaboratory evaluation, analysis dioxins, furans 1679
 toxicity organic chemicals, quantitative structure/activity relationship to *Photobacterium phosphoreum* 1971
FLAME RETARDANTS
 PBDE in biological samples Swedish environment 1703
 with printed circuits, recycling, possible formation PCDDs/PCDFs 2221
FLUE GAS
 combustion facilities, long-term sampling PCDDs/PCDFs 2097 concentrations PCDD, PCDF, PCB, PCBz, PAH, effect electrostatic precipitator 863
FLUXES, methane emission global wetlands, review assessment 261
FLY ASH
 oxychlorination phenol, role in PCDD/PCDF formation 2087 peat, coal, fuel oil, hazardous waste combustion, induction cytochrome P4501A1 Hepa-1 1499
FOREST
 grassland soils
 methane oxidation effect land use change 675
 hardwood ecosystem, methane flux relation to acid precipitation 721
FORMIC acid, aqueous soln, photooxidation presence hydrogen peroxide 1965
FOSSILS
 fuels, biomass combustion greenhouse gas emission 479 isotopically enriched methane, unaccounted-for sources 507
FOURIER TRANSFORM IR
SPECTROSCOPY methane emissions coalmine surface 23
FUEL oil, peat, coal, hazardous waste combustion, fly ash induction cytochrome P4501A1 Hepa-1 1499
FUGACITY MODEL
 aerosol indoor space spraying, simulation insecticides 1167 groundwater atrazine, simazine pollution 929
FURANS, analysis fish tissues, interlaboratory evaluation 1679
- G**
GAMMARUS pulex, feeding activity measurement 1375
GAS PHASE, chlorination naphthalene 2139
GEOLOGY, shallow submarine sediments, global methane flux 559
GERMANY
 methane major sources, isotopic composition 161 program, status report on testing activities, existing chemicals 1789
GLOBAL REACTIONS
 3-dimensional model, methane changes due to increased natural gas 769 carbon cycle, effect of landfill methane rates, fates 369 methane emission landfills, global estimations, comparison methods 387 landfill program, coalmines, natural gas 447 USSR sources 111 troposphere, photoreactions between methane, CO and ozone 657 troposphere, 3-dimensional models adopting longitudinally uniform and varying NO₂ and NMHC emissions 787
GOLDFISH GFS cells, cytotoxicity 109 chemicals and octanol/water partcoeffs 1015
GROUNDWATER, atrazine, simazine pollution, fugacity model 929
- H**
HALF life time, Cd, *Anaodonta anatina* 1479
HALITE, brine-saturated, uranium sorption 1753
HALOBENZENES, meta-substit, photolytic hydrolysis in water, quantitative QSAR 837
HCH
 aerobic mineralization by *Pseudomonas paucimobilis* UT26 1719
 degradation *Pseudomonas paucimobilis*, unstable intermediate, indirect identification 2279 stereochemical analysis by *Pseudomonas paucimobilis* UT26 1187
- HERBICIDES**
 detection water samples enzyme immunoassay techniques 2173 leaching, turfgrass soils 1541 levels 3,3',4,4'-tetrachloroazobenzene 2161 monitoring soil soln, use porous cups 2231 soil, pollution potential 1329 triadimenol conversion to triadimenol leaching turfgrass soils 1549
HEXAChLOROBENZENE, aquatic organisms, microcontaminant concentrations Rhine delta 817
HEXAChLOROCYCLOHEXANES
 hexachlorobenzene, microcontaminant concentrations Rhine delta 817 in leachate, headspace analysis 1355
HUMIC substances, degradation 1823
HYDROCARBONS, monofunctional organic compds, aqueous solubility 1239
HYDROGEN, concentration, effect on microbial methane stable H isotopic comp 55
HYDROPHOBIC pollutants, aqueous medium, phototransformation, PAH adsorption on silica 1617
HYDROXYL radicals, atmospheric gas-phase reaction rate with organic compds, computer estimation 2293
- I**
IMMUNOASSAYS, enzyme techniques, atrazine detection, water samples 2173
INCINERATION
 chlorinated organics, correlation chlorinated organic compd emission 2039 refuse derived fuel, biosludge, PCDDs/PCDFs formation 869
INCINERATORS
 decomposition PCDDs/PCDFs, NO_x, odorous compds by oxidizing catalyst 2167 toxicity equivs PCDD/PCDF mixtures, TEQ values theoretical models 1419 waste, decomposition organohalogen compds, disposal chlorofluorocarbons 2129
INDUSTRY natural gas, methane emission 441 waste incineration, risk assessment, global man exposure dioxins 1491
INSECTICIDES
 chlordipropifos, aqueous concentrations, uptake, elimination *Poecilia reticulata* 1607 phenylbenzoylurea, fate *Scenedesmus subspicatus* 955 simulation, aerosol indoor space spraying 1167
INTEGRATED TEST STRATEGY
 anaerobic biodegradation wastewaters 2241

- INVERTEBRATES**, aquatic, solvent effect, toxic lipophilic chemicals 2007
- INVESTMENTS**, environment protection, people richer 1003
- IRON** oxide, hydrous, chromate adsorption, chemical, spectroscopic evidence 1897
- IRRIGATION**, fertilization, effect on methane emission rice paddies 239
- ISOTOPES**
- enriched and fossil methane, unaccounted-for sources 507
 - methane, major sources, Germany, composition 161
- K**
- KAMLET-TAFT**, solvatochromic parameters, LSER nonelectrolytes, bioconcentration, fish, soil and sediments adsorption coeff, interfacial tension with water 1905
- KIESELROT**, organic, inorganic components 881
- KINETICS**
- methane oxidation oxic soils 687
 - model, photocatalytic oxidation using illuminated semiconductors 1119
- L**
- LANDFILLS**
- methane emission
 - coalmines, natural gas, global program 447
 - former USSR 401
 - methodologies global estimation 387
 - rates, fates, role in global carbon cycle 369
- LEACHATE**, headspace analysis for chlorophenols, chlorobenzenes 1355
- LEACHING**
- ash from wood treated with inorganic preservatives 2121
 - mecoprop via turfgrass soils 1541
 - turfgrass soils, triadimenol conversion to triadimenol 1549
- LIFE-CYCLE** assessment, classification toxic chemicals 1925
- LIGNIN**, humic substances, degradation products 1823
- LINEAR SOLVATION ENERGY**
- nonelectrolytes, bioconcentration, fish, soil and sediments adsorption coeff, interfacial tension with water 1905
- LINEAR SYSTEMS ANALYSIS** uptake, distribution, clearance lipophilic xenobiotics by fish, role blood proteins 1031
- LIPIDS**, large-scale dialysis, semipermeable membrane device 1993
- LIPOPHILIC CHEMICALS**
- toxic, solvent effect on aquatic invertebrates 2007
 - xenobiotics, waterborne, fish, linear systems analysis uptake, distribution, clearance role blood proteins 1031
- LITERATURE** review, PCDD/PCDFs, aquatic environment 1041
- LUTRA LUTRA** PCB, dieldrin, DDE contamination, regional trends 941
- M**
- MALTHION**, plus solvent, effect on aquatic invertebrates 2007
- MANURE**
- cattle, methane emissions 189
 - free-range cows, methane emission 179
- MASS SPECTROMETRY**
- chlorinated vanillins, syringaldehydes 1843
 - GC/MS artifact identification, USEPA methods 625, 8270, sample preparations 1743
- MECHANISMS**, $[O_2/\Delta]$ reactions involving biphenyl 1691
- MECOPROP**, leaching via turfgrass soils 1541
- MEMBRANES**, semipermeable device, large-scale dialysis, lipids 1993
- MERCURY**
- abiotic methylation, possible pathways, aquatic environment 2063
 - aquatic organisms, microcontaminant concentrations Rhine delta 817
- MESOCOSMS**, pond, ecotoxicology long-term studies 1137
- METABOLISM**
- 3-methylheptane, male 344 Fischer rats 1667
 - comparative elimination, PCB congeners termites 1291
 - phytol bacteria in sea water, temp dependent abiotic intermediate 1513
- METABOLITES**
- DDT, levels, St Lawrence river 1595
 - methylheptane, male 344 Fischer rats 1667
- METALLOTHIONINEIN**, Cd uptake, half life time *Anodonta anatina* 1479
- METHANE**
- $^{13}C/^{12}C$ ratio measurement, tunable laser absorption spectrometer 13
 - carbon isotopes, concentration southern hemisphere 95
 - consumption, soils, diffusional limits 715
 - decreasing trend, unpredictability future concentrations 803
 - detection methylotrophic bacteria in samples, molecular probing technique 1
 - development, tunable diode laser absorption spectrometer, measurement $^{13}C/^{12}C$ ratio 13
 - emissions
 - anaerobic waste stabilization ponds, Izmir wastewater treatment 633
 - coal burning 473
 - coal, natural gas industries UK 441
 - coalmines, global estimation 453
 - coal related sources, UK methodology 419
 - decreasing trend, unpredictability future concentrations 803
 - effect on climate 739
 - estimates, manure, cattle 179, 189
 - estimation, surface coalmine, open-path FTIR and modelling technique 23
 - farm animals, effect of diet 87
 - features, rice paddy fields 239
- global, coalmines, natural gas, landfills 447
- highly populated area, Heidelberg budget 143
- paddy fields, effect soil temp 247
- pre-industrial, origin and magnitude 69
- release rate, role expected ozone content, composition changes, greenhouse atmosphere next century 777
- review and assessment from wetlands 261
- rice paddies, possible mitigation strategy 201
- termites, nutritional factors 617, wood-feeding termites 263
- wetland rice areas 219
- flux
- arctic tundra, effect of environmental, biotic controls 357
 - effect of soil moisture and thaw depth wet coastal tundra ecosystems 329
- global, shallow submarine sediments 579
- hardwood forest ecosystem relation to acid precipitation 721
- oceanic, uncertainties, long-term variations 579
- GWP, impact future scenarios and other active gases 731
- landfills
- emission in former USSR 401
 - global emissions, methods for estimation 387
 - rates, fates, role in global carbon cycle 369
- methanogenesis, wetlands, temp regulation 321
- microbial stable hydrogen isotopic comp, effect H-concentration 55
- oxidation
- effect land use, forests, grassland soil 675
 - in oxic soils, kinetics 687
- photointeractions with CO, O₃, OH, global troposphere 657
- potential changes, increased use natural gas, 3-D model 769
- sources
- China, historical, current emissions 127
 - coal burning 473
 - fossil, isotopically enriched, unaccounted-for 507
- Germany, stable isotopic signature 161
- permafrost content, coring, experimental data, modelling theory, results 591, 595, 609
- USSR, global emission 111
- uptake, aerated soils, soil texture parametrization 697
- with CO in OH chemistry, effects feedbacks and reservoirs generated by reactive products 641
- with CO, O₃, OH photo-interactions, cause and effect analysis, global troposphere 657

- METHANOGENESIS**, temp regulations, sediment slurries, waterlogges swamps 321
- METHYLATION**, abiotic, Hg, possible pathways, aquatic environment 2063
- METHYLHEPTANE**, metabolism male 344 Fischer rats 1667
- METHYLOTROPHIC** bacteria, detection, natural samples, molecular probing techniques 1
- METOLACHLOR**, soil pollution potential 1329
- MICROCONTAMINANTS**, concentrations aquatic organisms, Rhine delta 817
- MILK**, different aged breast fed infants, PCDDs/PCDFs, intake, excretion 1947
- human, effect dietary habits and other parameters on PCDD/PCDF levels 1889
- MINERALIZATION**, aerobic, γ -HCH by *Pseudomonas paucimobilis* UT26 1719
- MINIOPTERUS SCHREIBERISI**, *Pipistrellus pipistrellus*, *Rhinolophus ferrumequinum* PCB congeners 1085
- MODELS**
- 3-D, global tropospheric methane chemistry, problem adopting longitudinally uniform and varying NO_x and NMHC emissions 787
 - aerosol indoor space spraying, simulation insecticides 1167
 - global 3-dimensional, methane changes due to increased natural gas 769
 - global ozone content and greenhouse changes next century, key role methane release rate 777
 - kinetic, photocatalytic oxidation using illuminated semiconductors 1119
 - near sunlight zone for photodegradation TCDDs in soil containing organic solvents 1263
 - Poecilia reticulata*, uptake, elimination, aqueous concentrations chlorpyrifos 1607
 - theoretical, estimating TEQ values PCDD/PCDF mixtures incinerators, toxicity equivs 1419
 - theory, results, arctic permafrost content 591, 595
 - UNIFAC environmental applications 1325
- MOLECULAR ORBITALS** calculations rate consts gas-phase OH radicals degradation organic compds 1273
- MONITORING**
- pesticides soil soln, use porous cups 2231
 - system, chlorinated benzenes, waste incinerators exhaust gas 1071
 - MONTMORILLONITE, aqueous suspensions, PCP sorption, thermodynamic parameters 1311
 - MOPHOLINE**, biodegradation, degradation wastewater treatment 1729
 - MUDSTONE**, uranium sorption 1753
 - MYXOCOCCUS** coralloides D, struvite production 1881
- N**
- NAPHTHALENE**, chlorination, gas phase 2139
- NATURAL GAS**
- effect of increase on methane changes in global 3-dimensional model 769
 - industry, methane emission 441
 - landfills, coal mines, global methane emissions program 447
- NERVE** agent, organophosphate, bioanalysis soil 2023
- NICKEL**, tissue, *Posidonia oceanica*, *Cymodocea nodosa* 963
- NITRIFICATION** activity, activated sludge not inhibited by morpholine 1729
- NITROGEN OXIDES**
- decomposition by oxidizing catalyst incineration plant 2167
 - nitrous, methane emission, soil suspensions oxidation-reduction status 251
 - NMHC emissions, ozone, OH global concentrations 3-D model 787
- NUTRITION**
- elements, toxicants, bioaccumulation, soft tissue composition *Dreissena polymorpha* 1559
 - factors affecting methane emission, termites 617
- O**
- OCDDS**, uptake pathways, soil carrots 1631
- OCEAN**
- methane flux, uncertainties, long-term variations 579
 - shallow submarine sediments, global methane flux 559
- ODOUROUS COMPDs** decomposition by oxidizing catalyst incineration plant 2167
- ONCORHYNCHUS MYKISS** intergated assessment biological effects boron 1383
- ORGANIC COMPDs**
- atmospheric gas-phase reaction rate with OH radicals and ozone, computer estimation 2293
 - boiling points, critical evaluation, principle, example 1579
- ORGANISMS**, aquatic, monitoring concentrations microcontaminants, reference values comparison, Rhine delta 817
- ORGANOCHLORINE COMPDs**
- lake sediments 2147
 - pesticide, residues and PCBs in *Anguilla anguilla*, UK freshwater reedbeds 2289
- ORGANOHALOGEN COMPDs**
- decomposition waste incinerators, disposal chlorofluorocarbons 2129
- ORGANOPHOSPHATE**, nerve agent, bioanalysis soil 2023
- OXIDATION**
- methane
 - effect land use change forest grassland soils 675
- kinetics, oxic soils 687
- natural ecosystems 261
 - photocatalytic, kinetic model using illuminated semiconductors 1119
- OXIDATION-REDUCTION** status, soil suspensions, methane and nitrous oxide emission 251
- OXYCHLORINATION**, phenol by fly ash, role in PCDD/PCDF formation 2087
- OXYGEN**, biphenyl reactions involving $[O_2(\Delta^1)]$ 1691
- OZONE**
- atmospheric gas-phase reaction rate with organic compds, computer estimation 2293
 - CO and methane, photochemical, global troposphere 657
 - content, composition changes, key role methane release rate, greenhouse atmosphere next century 777
- P**
- PAHS**
- adsorption on silica, phototransformation aqueous medium hydrophobic pollutants 1617
 - aqueous, organic, microcontaminant concentrations Rhine delta 817
 - bioremediation contaminated soil 1365
 - flue gas concentrations, effect electrostatic precipitator 863
 - UK urban air 2185
 - wet deposition, lake Michigan 1767
- PAPER**, pulp mills, organochlorine compds, lake sediments 2147
- PARTITION COEFFS**
- alkylphenol polyethoxylates, alkylphenols octanol/water, hexane/water systems 1471
 - aqueous solubility, environmental applications UNIFAC model 1325
 - octanol/water, cytotoxicity 109
 - chemicals goldfish GFS cells 1015
- PBDE**, biological samples Swedish environment 1703
- PBDFS**, PBDDs, monitoring, extrusion, injection molding PBTP-blended glass fiber/Sb₂O₃/tetrabromo-bisphenol 1953
- PBTP**, blended glass fiber/Sb₂O₃/tetrabromo-bisphenol, extrusion, injection molding, PBD/PBDD monitoring 1953
- PCBS**
- congeners metabolism, comparative elimination, termites 1291
 - three bat species, Spain 1085
 - Lutra lutra*, contamination regional trends 941
- DDTs** DDEs in *Phoca vitulina*, interlab study 1099
- digested UK sewage sludges 2199
 - flue gas concentrations, effect electrostatic precipitator 863
 - indoor air, sampling, analysis, permanent elastic sealants 871
 - mono- and non- α , ω -chlorine substit, det aroclors and environmental samples 1443

- non-ortho coplana daily intake drinking water, Japan 1527
- organochlorine pesticide residues in Anguilla anguilla, UK freshwater reedbeds 2289
- photodecomp, aqueous systems using TiO_2 catalyst 1213
- semi-automated analysis, application arctic marine mammal tissues 1981
- toxicity non-ortho and mono-ortho substitut chlorobiphenyls, fish and shellfish, Netherlands 1823
- Urban air 2185
- wet deposition, lake Michigan 1767
- PCBs, flue gas concentrations, effect electrostatic precipitator 863
- PCDD/PCDF, mixtures, combustion sources, estimation toxicity equivs when specific congener information lacking 1419
- PCDDs
- ambient air levels, Germany 851
 - aquatic environment, lit review 1041
 - blood concentration adults children, impact body-mass-index and age 1109
 - daily intake drinking water, Japan 1527
 - decomposition by oxidizing catalyst incinerators 2167
 - flue gas concentrations, effect electrostatic precipitator 863
 - formation incineration refuse derived fuel, biosludge 869
 - oxychlorination phenol by fly ash 2087
 - homologs, Kieselrot 881
 - intake, excretion, different aged breast 1947
 - long-term sampling, flue gas of combustion facilities 2097
 - possible formation, recycling flame retardants with printed circuits 2221
 - toxicity, fish and shellfish, Netherlands 1823
- PCDFs
- ambient air levels, Germany 851
 - aquatic environment, lit review 1041
 - blood concentration adults children, impact body-mass-index and age 1109
 - daily intake drinking water, Japan 1527
 - decomposition by oxidizing catalyst incineration plant 2167
 - flue gas concentrations, effect electrostatic precipitator 863
 - formation incineration refuse derived fuel, biosludge 869
 - oxychlorination phenol by fly ash 2087
 - homologs Kieselrot 881
 - intake, excretion, different aged breast fed infants 1947
 - levels human milk, dietary habits and other parameters 1889
 - long-term sampling, flue gas of combustion facilities 2097
 - possible formation, recycling flame retardants with printed circuits 2221
 - toxicity, fish and shellfish, Netherlands 1823
- PCPs sorption montmorillonite in aqueous suspensions, thermodynamic parameters 1311
- PEAT, coal, fuel oil, hazardous waste combustion, fly ash induction cytochrome P4501A1 Hepa-1 1499
- PENTACHLOROPHENOL, degradation, photocatalytic water decontamination 2103
- PERCA FLUVIATILIS comparison brachydanio rerio acute and early life stage exposure 3,4-dichloroaniline 1641
- PERMAFROST
- arctic, methane content 591, 595, 591, 595
 - methane, results arctic coring 609
- PESTICIDES
- assessment, environment, 91/414/EEC directive 979
 - cytotoxicity and octanol/water part coeffs, goldfish GFS cells 1015
 - monitoring soil soln, use porous cups 2231
 - organochlorine residues and PCBs in Anguilla anguilla
 - UK freshwater reedbeds 2289
- photodegradation carbamamide-photoproducts 1917
- selected in soil, pollution potential 1329
- PHARMACEUTICAL COMPODS aqueous solubility 1239
- PHARMACOKINETICS, fish, uptake, distribution, clearance lipophilic xenobiotics, role blood proteins 1031
- PHENANTHRENE, adsorbed on silica, phototransformation aqueous medium 1617
- PHENOLS
- cytotoxicity and octanol/water part coeffs, goldfish GFS cells 1015
 - oxychlorination by fly ash, role in PCDD/PCDF formation 2087
- PHENYLBENZOYLUREA, insecticides, fate Scenedesmus subspicatus 955
- PHOCA VITULINA PCBs/DDEs/DDT's interlab study 1099
- PHOTOBACTERIUM PHOSPHOREUM quantitative structure/activity relationship, toxicity organic chemicals to fish 1971
- PHOTOCHEMISTRY
- catalysis oxidation, kinetic model using illuminated semiconductors 1119
 - decomposition, PCBs aqueous systems using TiO_2 catalyst 1213
 - degradation 4-chlorophenol to CO_2 and HCl using high surface area titanium dioxide anodes 1301
 - oxidation, formic acid, aqueous soln, presence H_2O_2 1965
- photodegradation carbamamide photoproducts 1917
- photointeractions, CH_4 , CO , O_3 , OH , cause-effect analysis, global troposphere 657
- photolysis, meta-substit halobenzenes in water, quantitative QSAR 837
- singlet molecular oxygen production, quenching by hydroxybiphenyls 1691
- TCDDs in soil containing organic solvents, near sunlight zone model 1263
- transformation hydrophobic pollutants, aqueous medium, PAHs adsorbed on silica 1617
- water decontamination, pentachlorophenol degradation 2103
- PHYSICAL properties, boiling points, critical evaluation, principle, example 1579
- PHYTOL, bacterial metabolism in sea water, temp dependent abiotic intermediate 1513
- PIPISTRELLUS PIPISTRELLIS, Miniopterus schreibersi, Rhinolophus ferrumequinum PCB congeners 1085
- PLANTS
- carrots, OCDDs, uptake pathways from soil 1631
 - pine needles, trichloroacetic acid vicinity pulp mill 1859
 - stomatal control, effect on methane release Carex-dominated wetlands 339
- POECILIA RETICULATA uptake, elimination, aqueous concentrations, chloryrifos 1607
- POLLUTANTS
- distribution, behaviour, sampling strategy, vehicle fires in traffic tunnels 1159
 - hydrophobic aqueous medium phototransformation PAH adsorption on silica 1617
- POLLUTION
- potential, selected pesticides in soil 1329
 - Swedish environment, PBDE in biological samples 1703
- POLYBROMINATED diphenyl ethers, see PBDE
- POLYBUTYLENETEREPHTHALATE, see PBTP
- POLYCYCLIC aromatic hydrocarbons, see PAHs
- POLYETHOXYLATES alkylphenol aqueous solubility 1461, 1461
- alkylphenols, partitioning octanol/water, hexane/water systems 1471
- POLYMERASE chain reaction, detection methyltrophic bacteria natural samples 1
- POLYVINYL chloride, see PVC
- POPULATION, density, atmospheric methane, Heidelberg budget 143
- POSIDONIA OCEANICA tissues, Cu, Cr, Ni 963
- PRESERVATIVES, inorganic, treated wood, element composition and leaching of combustion ash 2121
- PRINTED circuits, flame retardants recycling, possible formation PCDDs/PCDFs 2221
- PROTEINS, blood, uptake, distribution, clearance waterborne lipophilic xenobiotics by fish, linear systems analysis 1031
- PSEUDOMONAS PAUCINOBILIS γ -HCH degradation, unstable intermediate, indirect identification 2279
- γ -HCH, aerobic mineralization 1719

- stereochemical analysis, γ -HCH degradation** 1187
- PSEUDOMONAS sp.**, pure culture, aerobic degradation [n -]alkanes in heavy oil 1151
- PULP mill**, vicinity, trichloroacetic acid in pine needles 1859
- PVC**, incineration, relationship to chlorinated hydrocarbon emission 2039
- PYROLYSIS**, products, thermal tetrachloroethylene decomp 1507
- turfgrass, leaching, triadimenol c conversion to
- Q**
- QSARS**, quantitative, photohydrolysis meta-substit halobenzenes in water 837
- quantitative relationship, *Photobacterium phosphoreum* and toxicity organic chemicals to fish 1971
- R**
- RADICALS**, gas-phase OH, molecular orbital calculations rate consts, degradation organic compds 1273
- RADIONUCLIDE** sorption uranium, brine-saturated halite, mudstone, carbonaceous minerals 1753
- REAGENTS**, levels 3,3',4,4'-tetrachloroazobenzene 2161
- RECYCLING**, flame retardants printed circuits, possible formation PCDDs/PCDFs 2221
- REFUSE**, derived fuel, incineration PCDDs/PCDFs formation 863
- RESPIRATION** activity, activated sludge not inhibited by morpholine 1729
- RHINOLOPHUS FERRUMEQUINUM** *Miniopterus schreibersi*, *Pipistrellus pipistrellus* PCB congeners 1085
- RICE**, field, effect irrigation, fertilization, temp on methane emission 239
- paddies possible mitigation methane emission 201
- soil suspensions, oxidation-reduction status, methane and nitrous oxide emission 251
- wetland rice areas, methane emission 219
- RISK ASSESSMENT**, dioxins, global man exposure, industrial waste incineration 1491
- pesticides, environment, 91/414/EEC directive 979
- ROOTS**, elongation, bioremediation PAH contaminated soil 1365
- S**
- SALIVA**, ethion quantification agriculture workers 897
- SALMO trutta**, bones, strontium-90 analysis 2031
- SAMPLING**, air indoor permanent elastic sealants 871
- long-term PCDDs/PCDFs, flue gas of combustion facilities 2097
- system, detn semivolatile organic compds ambient air 2255
- SCENEDESMUS SUBSPICATUS** fate phenylbenzoylure insecticides 955
- SCREENING** methods, organic, inorganic components Kieselrohr 881
- SEALANT MATERIAL** effect on indoor air analysis, sampling 871
- SEASONS**, PCDF-PCDD ambient air levels, Germany 851
- SEDIMENTS**, lake, organochlorine compds 2147 shallow submarine, global methane flux 559
- slurries, waterlogged swamps, temperature regulation methanogenesis 321
- Tigris river, Zn, Cu concentrations 2055
- SEEDS**, germination, bioremediation PAH contaminated soil 1365
- SEMICONDUCTORS**, illuminated, use in kinetic model photocatalytic oxidation 1119
- SEMVOLATILE ORGANIC COMPDS** sampling system, analytical method ambient air 2255
- SEWAGE**, sludge and yard waste compost, asbestos source, time-of-waste collection function 1537
- sludges, digested UK PCBs 2199
- SHELLFISH**, toxicity PCDDs/PCDFs/non-ortho- and mono-ortho substit chlorobiphenyls 1823
- SIMAZINE**, groundwater pollution, fugacity model 929
- SLUDGE**, incineration, PCDDs/PCDFs formation 869
- sewage digested UK, PCBs 2199
- SOIL**, aerated, methane uptake, soil texture parametrization 697
- containing organic solvents, near sunlight zone model for photodegradation TCDDs 1263
- contaminated, bioremediation with phytotoxicity tests 1365
- forest, grassland, methane oxidation, effect land use change 675
- mecoprot leaching
- methane consumption, atmospheric diffusion limits 715
- moisture and thaw depth wet coastal tundra ecosystems, effect on methane flux 329
- OCDDs, uptake pathways, carrots 1631
- organophosphate nerve agent, bioanalysis 2023
- oxic, kinetics methane oxidation 687
- PCP sorption aqueous suspensions montmorillonite, thermodynamic parameters 1311
- pesticides assessment, 91/414/EEC directive 979
- pollution potential, selected pesticides in soil 1329
- sediment, adsorption coeff, fish, interfacial tension with water, nonelectrolytes, linear solvation energy relationship 1905
- soil, use porous cups monitoring pesticides 2231
- suspensions, oxidation-reduction status, methane and nitrous oxide emission 251
- temp effect on methane emission, rice fields 247
- turfgrass leaching, triadimenol conversion to triadimenol 1549
- SOLAR PLANT** water photocatalytic decontamination, pentachlorophenol degradation 2103
- SOLUBILITY**, aqueous alkylphenols, alkylphenol polyethoxylates 1461
- complex organic compds 1239
- environmental applications UNIFAC model 1325
- SOLVENTS**, effect on toxicity lipophilic chemicals, aquatic invertebrates 2007
- SORPTION**, PCP aqueous suspensions montmorillonite, thermodynamic parameters 1311
- uranium, brine-saturated halite, mudstone, carbonate minerals 1753
- SPECTROMETRY**, methane $^{13}\text{C}/^{12}\text{C}$ ratio measurement, tunable laser absorption technique 13
- SPECTROSCOPY**, evidence, chromate adsorption on hydrous iron oxide 1897
- Fourier transform IR, methane emissions coalmine surface 23
- SPRAYING**, aerosol indoor space, simulation of insecticides 1167
- STATIC** biodegradation test, anaerobic wastewater degradation 2241
- STERNA forsteri**, eggs, lake Michigan, dioxin-like toxic potency 2079
- STRONTIUM-90**, bones *Salmo trutta*, analysis 2031
- STRUCTURE-ACTIVITY** see QSARs
- STRUVITE**, production, *Myxococcus coralloides D* 1881
- SURFACTANTS**, aqueous solubility alkylphenols, alkylphenol polyethoxylates 1461
- partition coeffs, alkylphenol polyethoxylates, alkylphenols octanol/water, hexane/water systems 1471
- SYRINGALDEHYDES**, chlorinated, synthesis structure and gas chromatographic separation 1843
- T**
- TCDDs**, equivalents, biomagnification H4IIIE assay ecosystems 1203
- soil containing organic solvents, near sunlight zone model for photodegradation 1263
- TEMPERATURE**, regulation

- methanogenesis, sediment slurries, waterlogged swamps 321
- TERMITES**
nutritional factors affecting methane emission 617
wood-feeding, methane emission 623
- TETRACHLOROAZOBENZENE**, levels bulk reagents, herbicides 2161
- TETRACHLOROCYCLOHEXA-1,4-DIENE**, γ -HCH degradation intermediate by *Pseudomonas paucimobilis* 2279
- TETRACHLOROETHYLENE**, thermal decomp 1507
- THERMOCHEMISTRY**, tetrachloroethylene decomp 1507
- TISSUES**, arctic marine mammals, semi-automated analysis non-ortho PCBs 1981
- TITANIUM**
dioxide, high surface area anodes, photodegradation 4-chlorophenol to CO₂ and HCl 1301
oxide, catalytic photodecomposition PCBs aqueous systems 1213
- TOXAPHENE**, chlorinated boranes including symmetrical aspects, distribution 1079
- TOXICITY**
2,3-dichloroaniline, *Perca fluviatilis*, comparison *brachydanio rerio* acute and early life stage exposure 1641
boron, *Oncorhynchus mykiss* 1383
chlorobenzenes, *Eisenia andrei* different exposures 2265
classification of chemicals 1653
equivs, PCDD/PCDF mixtures, combustion sources, estimation when specific congener information lacking 1419
life-cycle assessment, classification chemicals 1925
lipophilic chemicals, solvent effect on aquatic invertebrates 2007
non-ortho and mono-ortho substitut chlorobiphen PCDDs/PCDFs
fish and shellfish
Netherlands 1823
nutrient elements, bioaccumulation, soft tissue composition *Dreissena polymorpha* 1559
organics to fish, quantitative structure/activity relationship to *Photobacterium phosphoreum* 1971
- TOXICOOKINETICS**, fish, uptake, distribution, clearance lipophilic xenobiotics role blood proteins 1031
- TRIADIMEFON**, conversion to triadimenol, leaching turfgrass soils 1549
- TRIADIMENOL**, via triadimefon conversion, leaching turfgrass soils 1549
- TRIAZINE**, detection, water samples, enzyme immunoassay techniques 2173
- TRICHLOROACETIC acid**, pine needles vicinity pulp mill 1859
- TUNABLE** laser absorption spectrometer, methane $^{13}\text{C}/^{12}\text{C}$ ratio measurement 13
- TUNNELS**, vehicle fires, distribution, behaviour dioxin like pollutants, sampling strategy 1159
- U**
- UNIFAC model**, environmental applications 1325
- URANIUM**, sorption, brine-saturated halite, mudstone, carbonate minerals 1753
- URINE**, agriculture workers, ethion quantification 897
- USEPA** method 625, 8270, sample preparations, GC/MS artifact identification 1743
- USSR** sources, global emission methane 111
- V**
- VANILLINS**, chlorinated, synthesis structure and gas chromatographic separation 1843
- VEHICLES**, fires in traffic tunnels, distribution, behaviour dioxin like pollutants, sampling strategy 1159
- W**
- WARFARE**, organophosphate nerve agent, bioanalysis soil 2023
- WASTE**
anaerobic stabilization, methane emission, pond study 633
incinerators
decomposition organohalogen compds, disposal
chlorofluorocarbons 2129
exhaust gas monitoring system, chlorinated benzenes 1071
industrial incineration, riskassessment, global man exposure dioxins 1491
peat, coal, fuel oil combustion, fly ash cytochrome P4501A1 Hepa-1 induction 1499
sewage sludge compost asbestos source collection function 1537
- WASTEWATER**
anaerobic biodegradability, assessment, intergrated test strategy 2241
Izmir treatment system 633
treatment morpholine degradation 1729
- WATER**
DDT, metabolites concentration, St Lawrence river 1595
detection herbicides, enzyme immunoassay techniques 2173
photocatalytic decontamination, pentachlorophenol degradation 2103
- WET flux**, PCBs, lake Michigan 1767
- WETLANDS**
Carex-dominated, effect plant stomatal control on methane release 339
methanogenesis, temp regulations 321
review assessment methane emission 261
- WOLFCAMP** carbonate, uranium sorption 1753
- WOOD**
feeding, termites methane emission 623
treated inorganic preservatives, element composition and leaching of combustion ash 2121
- X**
- X-RAYS**, struvite production, *Myxococcus coralloides D* 1881
- XENOBIOTICS**
ecotoxicology long-term studies, in situ pond mesocosms 1137
toxic, fate in termites 1291
- Z**
- ZINC**, concentration, fish, sediments, Tigris river 2055



AUTHOR INDEX VOL. 26, 1993

- Acquaviva M. see Rontani J.-F. 1513
- Aheli M. and Giger W.
Aqueous solubility of alkylphenols and alkylphenol polyethoxylates 1461
- Aheli M. and Giger W.
Partitioning of alkylphenols and alkylphenol polyethoxylates between water and organic solvents 1471
- Ahlers J. see Greim H. 1653
- Ahokas J. T. see Haritos V. S. 1291
- Alcock R. E. and Jones K. C.
Polychlorinated biphenyls in digested UK sewage sludges 2199
- Altissimo L. see Zanin G. 929
- Altissimo L. see Zanin G. 929
- Andronova N. G. and Karol I. L.
The contribution of USSR sources to global methane emission 111
- Andronova N. G. Karol I. L.
and Schlesinger M. E.
Cause-and-effect analysis of the photochemical interactions among CH_4 , CO , O_3 and OH in the global troposphere 657
- Ankley G. T. see Tillitt D. E. 2079
- Ankley G. T. see Jones P. D. 1203
- Aoki S. see Tsuda T. 2301
- Aozasa O. see Miyata H. 1527
- Arias J. M. see
Gonzalez Muñoz M. T. 1881
- Attar A. see Yu-yun T. 955
- Attar A. see Yu-yun T. 955
- Babut M. see Perrin-Ganier C. 2231
- Bachelet D. and Neue H. U.
Methane emissions from wetland rice areas of Asia 219
- Bahadir M. see Lorenz W. 2221
- Bahadir M. see Wichmann H. 1159
- Balfanz E. Fuchs J. and Kleper H.
Sampling and analysis of polychlorinated biphenyls (PCB) in indoor air due to permanently elastic sealants 871
- Balfanz E. Fuchs J. and Kleper H.
Sampling and analysis of polychlorinated biphenyls (PCB) in indoor air due to permanently elastic sealants 871
- Bandeira A. see Martius C. 623
- Barnum J. B. see Black J. A. 1383
- Bartlett K. B. and Harris R. C.
Review and assessment of methane emissions from wetlands 261
- Baud-Grasset F. Baud-Grasset S. and Safferman S. I.
Evaluation of the bioremediation of a contaminated soil with phytotoxicity tests 1365
- Baud-Grasset S. see Baud-Grasset F. 1365
- Bayer E. and Fleischhauer G.
Status report on the testing activities according to the German program for existing chemicals 1789
- Bayer E. see Greim H. 1653
- Beck L. L.
A global methane emissions program for landfills, coal mines, and natural gas systems 447
- Belfroid A. Selinen W.
van Gestel K. and Hermens J.
The acute toxicity of chlorobenzenes for earthworms (*Eisenia andrei*) in different exposure systems 2265
- Bender M. and Conrad R.
Kinetics of methane oxidation inoxic soils 687
- Bergamaschi P. see Schupp M. 13
- Bergamaschi P. see Levin I. 161
- Bertolotti S. G. see Martíre D. O. 1691
- Best D. A. see Jones P. D. 1203
- Blas R. see Greim H. 1653
- Blas W. R. see Strotmann U. J. 2241
- Blas W. R. see Strotmann U. J. 1729
- Birge W. J. see Black J. A. 1383
- Bjerregaard P. see Clausen P. S. 2209
- Black J. A. Barnum J. B. and Birge W. J.
An integrated assessment of the biological effects of boron to the rainbow trout 1383
- Blanco J. see Minero C. 2103
- Bogner J. and Spokas K.
Landfill CH_4 : rates, fates, and role in global carbon cycle 369
- Bombick D. D. see Serve' M. P. 1667
- Bonati L. see Pitea D. 1419
- Bontinck W. J. see H.-Jones P. 1491
- Borgmann A. see Sherry J. P. 2173
- Borin M. see Zanin G. 929
- Borin M. see Zanin G. 929
- Born J. G. P. Louw R. and Mulder P.
Fly ash mediated (oxy)chlorination of phenol and its role in PCDD/F formation 2087
- Bösinger R. see Thom M. 143
- Boule P. see David B. 1617
- Branine M. E. see Lodman D. W. 189
- Braslavsky S. E. see Martíre D. O. 1691
- Brauman A. see Rouland C. 617
- Brenner K. S. and Knies H.
Workplace monitoring of PBDFs and PBDDs during extrusion production and injection molding of a polybutyleneterephthalate (PBTP)/glass fibre/tetrabromobisphenol A carbonate oligomer (BC52')/Sb₂O₃-resin; II 1953
- Brenninkmeijer C. A. M. see Lasse K. R. 95
- Breuzin C. see Perrin-Ganier C. 2231
- Brun T. G. and J. D. Kilgroe Corrigendum 1415
- Broecker B. see Greim H. 1653
- Brühl C.
The impact of the future scenarios for methane and

- other chemically active gases on the GWP of methane 731
- Brühl C.** see Lelieveld J. 739
- Büchen M.** see König J. 851
- Büchen M.** see König J. 851
- Burke R. A. Jr.**
- Possible influence of hydrogen concentration on microbial methane stable hydrogen isotopic composition 55
- Burke R. A. Jr** see Hovland M. 559
- Burnett V.** see Halsall C. 2185
- Calamari D.** see Zanin G. 929
- Calamari D.** see Zanin G. 929
- Calleja M. C. and Persoone G.**
- The influence of solvents on the acute toxicity of some lipophilic chemicals to aquatic invertebrates 2007
- Caponecchi G.** see Perez G. 2139
- Cardy D. L. N.** see Murrell J. C. 1
- Carmean B. R.** see Lodman D. W. 189
- Catsiki V. A. and Panayotidis P.**
- Copper, chromium and nickel in tissues of the Mediterranean seagrasses *Posidonia oceanica* and *Cymodocea nodosa* (*Potamogetonaceae*) from Greek coastal areas 963
- Catsiki V. A. and Panayotidis P.**
- Copper, chromium and nickel in tissues of the Mediterranean seagrasses *Posidonia oceanica* and *Cymodocea nodosa* (*Potamogetonaceae*) from Greek coastal areas 963
- Chadha A.** see Kirchgessner D. A. 23
- Chang T.** see Miyata H. 1527
- Chapin III F. S.** see Torn M. S. 357
- Chen F., Holten-Andersen J. and Tyle H.**
- New developments of the UNIFAC model for environmental application 1325
- Chen P. H., VanAusdale W. A., Keeran W. S. and Roberts D. F.**
- GC/MS Identification of artifacts formed during sample preparation using USEPA methods 625 and 8270 1743
- Clausen P. S., Bjerregaard P. and Depledge M. H.**
- Passive and active cadmium uptake in the isolated gills of the shore crab *Carcinus maenas* (L.) 2209
- Clemens J. M.** see Serve' M. P. 1667
- Clement R.** see Ramamoorthy S. 1679
- Conrad R.** see Bender M. 687
- Cosenitino U.** see Pitea D. 1419
- Crawford R.** see Jones P. D. 1203
- Creedy D. P.**
- Methane emissions from coal related sources in Britain: development of a methodology 419
- Crutzen P. J.** see Schupp M. 13
- Crutzen P. J.** see Lelieveld J. 739
- Crutzen P. J.** see Kanakidou M. 787
- David B. and Boule P.**
- Phototransformation of hydrophobic pollutants in aqueous medium I - PAHs adsorbed on silica 1617
- Davis A. P. and Huang C. P.**
- A kinetic model describing photocatalytic oxidation using illuminated semiconductors 1119
- Davis B.** see Halsall C. 2185
- DeGalán N.** see Jones P. D. 1203
- DeLaune R. D.** see Masscheleyen P. H. 251
- Deneer J. W.**
- Uptake and elimination of chlorpyrifos in the guppy at sublethal and lethal aqueous concentrations 1607
- Depledge M. H.** see Clausen P. S. 2209
- deBoer J., Stronck C. J. N., Traag W. A. and vanderMeer J.**
- Non-ortho and mono-ortho substituted chlorobiphenyls and chlorinated dibenzo-p-dioxins and dibenzofurans in marine and freshwater fish and shellfish from The Netherlands 1823
- deGerlache J.** see H.-Jones P. 1491
- de Wit C.** see Sellstrom U. 1703
- Dobrogowska C.** see Xing B. 1311
- Dörr G.** see Hippelien M. 2255
- Dörr H., Katruff L. and Levin I.**
- Soil texture parameterization of the methane uptake in aerated soils 697
- Dörr H.** see Levin I. 161
- Doxtader K. G.** see Ward G. M. 87
- Dudas M. J.** see Xing B. 1311
- Eadon G.** see Gierthy J. F. 1225
- Ebel J. G. Jr.** see Petrovic A. M. 1541
- Ebel J. G., Jr.** see Petrovic A. M. 1549
- Eisenreich S. J.** see Franz T. P. 1767
- Eismann F.** see Strotmann U. J. 2241
- Epperson D. L.** see Peer R. L. 387
- Evans C.** see Martínez D. O. 1691
- Fahey T. J.** see Yavitt J. B. 721
- Feltz K. P.** see Schwartz T. R. 1443
- Fernández M. A., Hernández L. M., Ibáñez C., González M. J., Guillén A. and Pérez J. L.**
- Congeners of PCBs in three bat species from Spain 1085
- Fleischhauer G.** see Bayer E. 1789
- Fletcher C. L. and McKay W. A.**
- Polychlorinated dibenzo-p-dioxins (PCDDs) and dibenzofurans (PCDFs) in the aquatic environment - a literature review 1041
- Ford C. A., Muir D. C. G., Norstrom R. J., Simon M. and Mulvihill M. J.**
- Development of a semi-automated method for non-ortho PCBs: application to Canadian Arctic marine mammal tissues 1981
- Först C., Simon H. and Stiegritz L.**
- Determination of chlorophenols and chlorobenzenes in leachate by headspace analysis 1355
- Franz T. P. and Eisenreich S. J.**
- Wet deposition of polychlorinated biphenyls to green bay, Lake Michigan 1767
- Freitag D.** see Yu-yun T. 955
- Freitag D.** see Yu-yun T. 955
- French J. R. J.** see Haritos V. S. 1291
- Frolkis V. A.** see Karol I. L. 777
- Fuchs J.** see Balfanz E. 871
- Fuchs J.** see Theisen J. 881
- Fuchs J.** see Balfanz E. 871
- Fuchs J.** see Theisen J. 881
- Fujita T.** see Tsuda T. 2301
- Funcke W., Linnemann H. and Philipp C.**
- Long-term sampling method for polychlorinated dibenzofurans (PCDFs) and dibenzo(p)dioxins (PCDDs) in flue gas of combustion facilities 2097
- Funcke W., Hovemann A. and Luthardt P.**
- Influence of the electrostatic precipitator on concentrations of organic compounds in flue gas 863
- Funcke W., Hovemann A. and Luthardt P.**
- Influence of the electrostatic precipitator on concentrations of organic compounds in flue gas 863

- Gamer A. O. see Greim H. 1653
- Gao H. see Zhao Y. 1971
- García N. A. see Martíre D. O. 1691
- Ge see Khalil M. A. K. 473
- Gelbke H.-P. see Greim H. 1653
- Gierthy J. F. Swami K. Narang R. Narang A. and Eadon G. Detection of dioxin-like activity in dielectric fluids by an epithelial cell culture bioassay 1225
- Giesy J. P. see Tillitt D. E. 2079
- Giesy J. P. see Jones P. D. 1203
- Giger W. see Ahel M. 1461
- Giger W. see Ahel M. 1471
- Goedicke J. see Klein A. W. 979
- Goedicke J. see Klein A. W. 979
- Gomez A. J. see Lassey K. R. 95
- González M. J. see Fernández M. A. 1085
- Gonzalez Muñoz M. T. Arias J. M. Montoya E. and Rodriguez Gallego M. Struvite production by *Myxococcus coralloides* D 1881
- Grabowski J. and Vasconcelos G. Reasonable investments in environmental protection can make people richer 1003
- Grabowski J. and Vasconcelos G. Reasonable investments in environmental protection can make people richer 1003
- Green A. E. S. and Wagner J. C. Correlation of chlorinated organic compound emissions from incineration with chlorinated organic input 2039
- Greim H. Ahlers J. Bias R. Broecker B. Gamer A. O. Gelbke H.-P. Haltirsch W. G. Klimisch H.-J. Mangelsdorf I. Schön N. Stropp G. Vogel R. Welter G. and Bayer E. Priority setting for the evaluation of existing chemicals the approach of the German advisory Committee on existing chemicals of environmental relevance (BUA) 1653
- Guillén A. see Fernández M. A. 1085
- Guinée J. and Heijungs R. A proposal for the classification of toxic substances within the framework of life cycle assessment of products 1925
- Güngüm B. see Ünlü E. 2055
- Günther W. J. see König J. 851
- Günther W. J. see König J. 851
- Gupta P. K. see Parashar D. C. 247
- Gutenmann W. H. see Petrovic A. M. 1541
- Gutenmann W. H. see Secor C. L. 1559
- H-Jones P. deGerlache J. Marti E. Mischer G. Scherer M.-C. Bontinck W. J. and Niessen H. J. The global exposure of man to dioxins: a perspective on industrial waste incineration 1491
- Halonen I. Tarhanen J. Kopsa T. Palonen J. Virolki H. and Ruuskanen J. Formation of polychlorinated dioxins and dibenzofurans in incineration of refuse derived fuel and biosludge 1869
- Halsall C. Burnett V. Davis B. Jones P. Pettit C. and Jones K. C. PCBs and PAHs in U.K. urban air 2185
- Haltirsch W. G. see Greim H. 1653
- Hanai Y. see Ok G. 2167
- Haritos V. S. French J. R. J. and Ahokas J. T. The metabolism and comparative elimination of polychlorinated biphenyl congeners in termites 1291
- Harris G. W. see Schupp M. 13
- Harriss R. C. see Bartlett K. B. 261
- Harshbarger J. see Secor C. L. 1559
- Hässinen E. see Särkkä J. 2147
- Hashimoto S. Schneider S. and Morita M. Levels of 3,3',4,4'-tetrachloroazobenzene in herbicides and bulk reagents 2161
- Hastings S. J. see Vourlitis G. L. 329
- Hauth B. see Strotmann U. J. 2241
- Hedderich J. see Rimkus G. 1099
- Heidemann G. see Rimkus G. 1099
- Heijungs R. see Guinée J. 1925
- Hendriks A. J. and Pieters H. Monitoring concentrations of microcontaminants in aquatic organisms in the Rhine delta: a comparison with reference values 817
- Hendriks A. J. and Pieters H. Monitoring concentrations of microcontaminants in aquatic organisms in the Rhine delta: a comparison with reference values 817
- Hepler L. G. see Xing B. 1311
- Hermens J. see Belfroid A. 2265
- Hernández L. M. see Fernández M. A. 1085
- Herrchen M. see Klein A. W. 979
- Herrchen M. see Klein A. W. 979
- Hippelein M. Kaupp H. Dörr G. and McLachlan M. S. Testing of a sampling system and analytical method for determination of semivolatile organic compounds in ambient air 2255
- Hirvonen A. see Juuti S. 1859
- Hixson C. J. see Serve' M. P. 1667
- Holopainen J. K. see Juuti S. 1859
- Holten-Andersen J. see Chen F. 1325
- Horvath A. L. Critical evaluation of normal boiling points: principle and example 1579
- Hovemann A. see Funcke W. 863
- Hovemann A. see Funcke W. 863
- Hovland M. Judd A. G. and Burke R. A. Jr. The global flux of methane from shallow submarine sediments 559
- Howard P. H. see Meylan W. M. 2293
- Hsia T. H. Lo S. L. Lin C. F. and Lee D. Y. Chemical and spectroscopic evidence for specific adsorption of chromate on hydrous iron oxide 1897
- Huang C. P. see Davis A. P. 1119
- Huckles J. see Meadows J. 1993
- Hyötyläinen J. and Knuutila J. Chemical degradation products of lignin and humic substances - I. Synthesis, structure verification and gas chromatographic separation of chlorinated vanillines and syringaldehydes 1843
- Ibáñez C. see Fernández M. A. 1085
- Isogami C. see Nojima K. 921
- Isogami C. see Nojima K. 921
- Jansson B. see Sellström U. 1703
- Jenkins M. A. see Vourlitis G. L. 329
- Jobellius-Korte, M. see Yu-yun T. 955
- Jobellius-Korte, M. see Yu-yun T. 955
- Johnson D. E. see Ward G. M. 87
- Johnson D. E. see Lodman D. W. 189

- Jones D. P. W.** see Taylor E. J. 1375
- Jones K. C.** see Halsall C. 2185
- Jones K. C.** see Alcock R. E. 2199
- Jones P.** see Halsall C. 2185
- Jones P. D.** Ankley G. T. Best D. A. Crawford R. DeGalan N. Giesy J. P. Kublak T. J. Ludwig J. P. Newsted J. L. Tillitt D. E. and Verbrugge D. A. Biomagnification of bioassay derived 2,3,7,8-tetrachlorodibenzo-*p*-dioxin equivalents 1203
- Judd A. G.** see Hovland M. 559
- Junk W.** see Martius C. 623
- Jüttner I.** see Lay J. P. 1137
- Juuti S.** Hirvonen A. Tarhanen J. Holopainen J. K. and Ruuskanen J. Trichloroacetic acid in pine needles in the vicinity of a pulp mill 1859
- Kammen D. M.** and Marino B. D. On the origin and magnitude of pre-industrial anthropogenic CO₂ and CH₄ emissions 69
- Kanakidou M.** and Crutzen P. J. Scale problems in global tropospheric chemistry modeling: comparison of results obtained with a three-dimensional model, adopting longitudinally uniform and varying emissions of NO_x and NMHC 787
- Kärenlampli S.** see Kopponen P. 1499
- Karmaus W.** see Pleiß T. 1109
- Karol I. L.** Kiselev A. A. and Frolikis V. A. The key role of methane release rate in the expected ozone content and composition changes of the greenhouse atmosphere in the next century 777
- Karol I. L.** see Andronova N. G. 111
- Karol I. L.** see Andronova N. G. 657
- Katou T.** see Ok G. 2167
- Katruff L.** see Dörr H. 697
- Kauppi H.** see Hippeltein M. 2255
- Kawaguchi H.** Photo-oxidation of formic acid in aqueous solution in the presence of hydrogen peroxide 1965
- Keeran W. S.** see Chen P. H. 1743
- Keheyen Y.** see Perez G. 2139
- Kettstrup A.** see Yu-yun T. 955
- Kettstrup A.** see Yu-yun T. 955
- Khalil M. A. K.** see K. R. Smith 479
- Khalil M. A. K.** see Rasmussen R. A. 591
- Khalil M. A. K.** see Moraes F. 595
- Khalil M. A. K.** see Lu Y. 641
- Khalil M. A. K.** and Rasmussen R. A. Decreasing trend of methane: unpredictability of future concentrations 803
- Khalil M. A. K.** Shearer M. J. and Rasmussen R. A. Methane sources in China: historical and current emissions 127
- Khalil M. A. K.** Rasmussen R. A. Shearer M. J. Ge S. and Rau J. A. Methane from coal burning 473
- Khan S. U.** see Raju G. S. 1429
- Kieper H.** see Balfanz E. 871
- Kieper H.** see Balfanz E. 871
- Klerkegaard C. A.** see Sellström U. 1703
- Kikuchi R.** see Nagasawa S. 2279
- Kikuchi R.** see Nagasawa S. 1187
- Kikuchi R.** see Nagasawa S. 1719
- Kilgroe J. D.** see Brna T. G. 1415
- Kirchgessner D. A.** Piccot S. D. and Chadha A. Estimation of methane emissions from a surface coal mine using open-path FTIR spectroscopy and modeling techniques 23
- Kirchgessner D. A.** Piccot S. D. and Winkler J. D. Estimate of global methane emissions from coal mines 453
- Kiselev A. A.** see Karol I. L. 777
- Klamt A.** Estimation of gas-phase hydroxyl radical rate constants of organic compounds from molecular orbital calculations 1273
- Klein A. W.** Goedicke J. Klein W. Herrchen M. and Kördel W. Environmental assessment of pesticides under Directive 91/414/EEC 979
- Klein A. W.** Goedicke J. Klein W. Herrchen M. and Kördel W. Environmental assessment of pesticides under Directive 91/414/EEC 979
- Klein W.** see Klein A. W. 979
- Klein W.** see Klein A. W. 979
- Klimisch H.-J.** see Greim H. 1653
- Knies H.** see Brenner K. S. 1953
- Knuutilinen J.** see Hyötyläinen J. 1843
- Koike S.** see Saito H. 1015
- Koike S.** see Saito H. 1015
- Koistinen J.** see Särkkä J. 2147
- Kojima M.** see Tsuda T. 2301
- König J.** Thiesen J. Günther W. J. Liebl K. H. and Büchen M. Ambient air levels of polychlorinated dibenzofurans and dibenz(*p*)dioxins at different sites in Hessen 851
- König J.** Thiesen J. Günther W. J. Liebl K. H. and Büchen M. Ambient air levels of polychlorinated dibenzofurans and dibenz(*p*)dioxins at different sites in Hessen 851
- Koppe J. G.** see Pluim H. J. 1889
- Koppe J. G.** see Pluim H. J. 1947
- Kopponen P.** Tarhanen J. Ruuskanen J. Törrönen R. and Kärenlampi S. Peat induces cytochrome P450A1 in Hepa-1 cell line. Comparison with fly ashes from combustion of peat, coal, heavy fuel oil and hazardous waste 1499
- Kopsa T.** see Halonen I. 1869
- Kördel W.** see Klein A. W. 979
- Kördel W.** see Klein A. W. 379
- Koyasu J.** see Saito H. 1015
- Koyasu J.** see Saito H. 1015
- Kramer I.** see Pluim H. J. 1889
- Kublak T. J.** see Tillitt D. E. 2079
- Kublak T. J.** see Jones P. D. 1203
- Kuntz H. T.** see Secor C. L. 1559
- Kvenvolden K. A.** and Lorenson T. D. Methane in permafrost - preliminary results from coring at Fairbanks, Alaska 609
- Labat M.** see Rouland C. 617
- Lacroix A. V.** Unaccounted-for sources of fossil and isotopically-enriched methane and their contribution to the emissions inventory: A review and synthesis 507
- Lambert G.** and Schmidt S. Reevaluation of the oceanic flux of methane: uncertainties and long term variations 579
- Lanzarini G.** see Setti L. 1151
- Lasagni M.** see Pitea D. 1419
- Lassey K. R.** Lowe D. C. Brenninkmeijer C. A. M. and Gomez A. J. Atmospheric methane and its carbon isotopes in the southern hemisphere: their time series and an instructive model 95
- Lay J. P.** Peither A. Jüttner I. and Weiss K. In situ pond mesocosms for

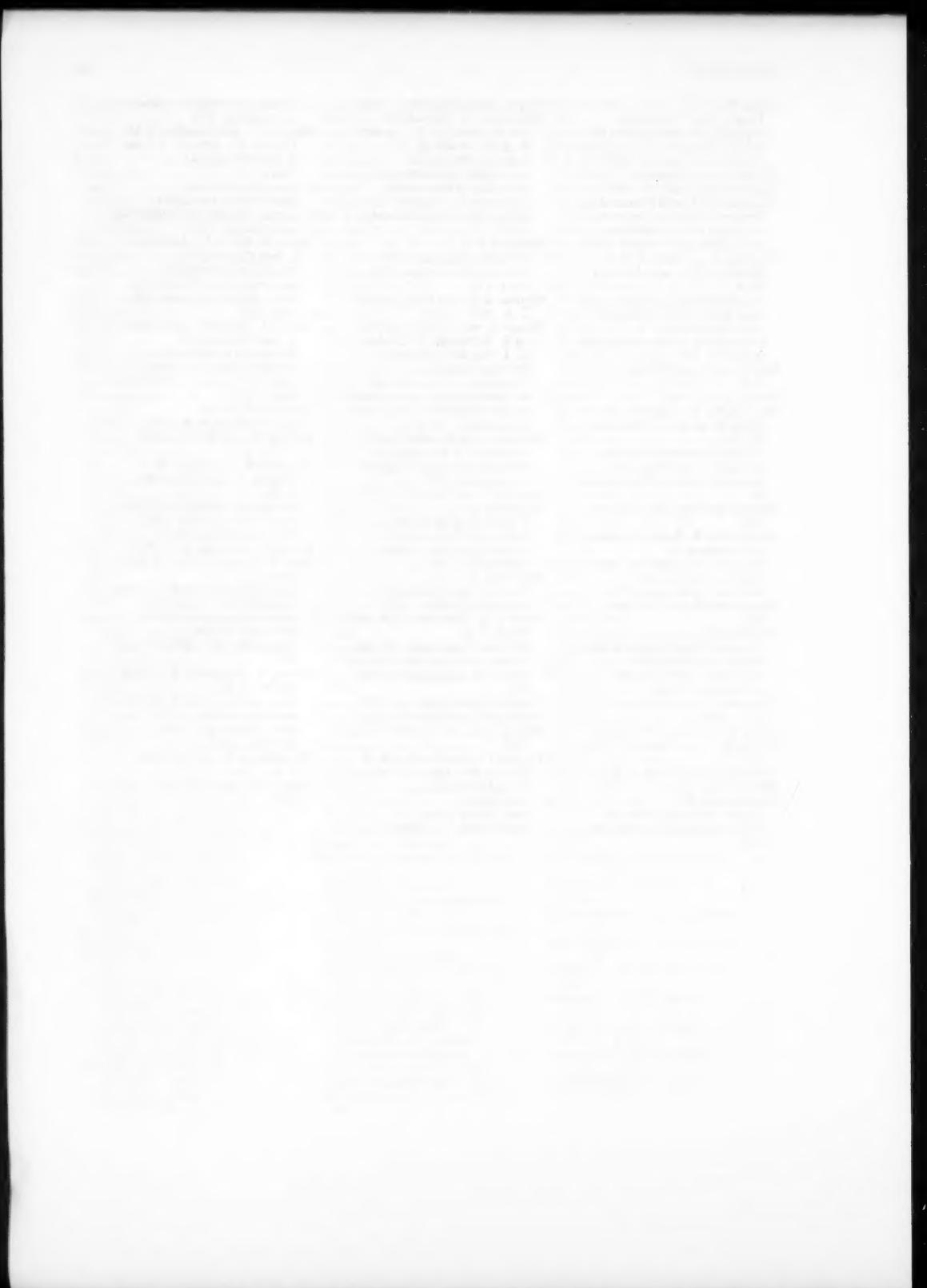
- ecotoxicological long-term studies 1137
- Lebedev V. S.** see Nozhevnikova A. N. 401
- Lee D. Y.** see Hsia T. H. 1897
- Lee H. J.** see Park J. H. 1905
- Lelieveld J.** Crutzen P. J. and Brühl C.
Climate effects of atmospheric methane 739
- Lemieux C.** see Pham T. 1595
- Lepage M.** see Rouland C. 617
- Levin I.** Bergamaschi P., Dörr H. and Trapp D.
Stable isotopic signature of methane from major sources in Germany 161
- Levin I.** see Thom M. 143
- Levin I.** see Dörr H. 697
- Liebl K. H.** see König J. 851
- Liebl K. H.** see König J. 851
- Lifshitz A. B.** see Nozhevnikova A. N. 401
- Lilla E.** see Perez G. 2139
- Lin C. F.** see Hsia T. H. 1897
- Linnemann H.** see Funcke W. 2097
- Lisk D. J.** see Manos C. G. 1537
- Lisk D. J.** see Petrovic A. M. 1541
- Lisk D. J.** see Petrovic A. M. 1549
- Lisk D. J.** see Secor C. L. 1559
- Livingston G. P.** see Morrissey L. A. 339
- Lo S. L.** see Hsia T. H. 1897
- Lozman D. W.** Branine M. E. Carmean B. R. Zimmerman P., Ward G. M. and Johnson D. E.
Estimates of methane emissions from manure of U.S. cattle 189
- Lorenson T. D.** see Kvenvolden K. A. 609
- Lorenz W.** and Bahadir M.
Recycling of flame retardants containing printed circuits: a study of the possible formation of polyhalogenated dibenzodioxins/furans 2221
- Lorenz W.** see Wichmann H. 1159
- Louv R.** see Born J. G. P. 2087
- Lowe D. C.** see Lassey K. R. 95
- Lu Y.** and Khalil M. A. K.
Methane and carbon monoxide in OH chemistry: the effects of feedbacks and reservoirs generated by the reactive products 641
- Ludwig J. P.** see Jones P. D. 1203
- Lum K.** see Pham T. 1595
- Luthardt P.** see Funcke W. 863
- Luthardt P.** see Funcke W. 863
- M. Apte M.** see K. R. Smith 479
- Mallot S.** see Minero C. 2103
- Mallory L. L.** see Nigg H. N. 897
- Mallory L. L.** see Nigg H. N. 897
- Mamouni A.** see Méallier P. 1917
- Manegdeg F.** see K. R. Smith 479
- Mangelsdorf I.** see Greim H. 1653
- Manninen P.** see Särkkä J. 2147
- Manos C. G.** Patel-Mandlik K. J. and Lisk D. J.
Asbestos in yard or sludge composts from the same community as a function of time-of-waste-collection 1537
- Mansour M.** see Méallier P. 1917
- Mäntyskoski K.** see Särkkä J. 2147
- Marino B. D.** see Kammen D. M. 69
- Marti E.** see H.-Jones P. 1491
- Martíre D. O.** Evans C. Bertolotti S. G., Braslavsky S. E. and Garcia N. A.
Singlet molecular oxygen [$O_2^{\cdot}(\Delta_g)$] production and quenching by hydroxybiphenyls 1691
- Martius C.** Wassmann R. Thein U., Bandeira A., Rennenberg H., Junk W. and Seiler W.
Methane emission from wood-eating termites in Amazonia 623
- Marutzky R.** see Pohlhardt K. 2121
- Mason C. F.**
Organochlorine pesticide residues and PCBs in eels (*Anguilla anguilla*) from some British fresh water reedbeds 2289
- Mason C. F.**
Regional trends in PCB and pesticide contamination in northern Britain as determined in otter (*Lutra lutra*) scats 941
- Mason C. F.**
Regional trends in PCB and pesticide contamination in northern Britain as determined in otter (*Lutra lutra*) scats 941
- Masschelyan P. H.** DeLaune R. D. and Patrick Jr. W. H.
Methane and nitrous oxide emissions from laboratory measurements of rice soil suspension: effect of soil oxidation-reduction status 251
- Matoba Y.** Ohnishi J. and Matsuo M.
A simulation of insecticides in indoor aerosol space spraying 1167
- Matsuo M.** see Nagasawa S. 2279
- Matsuo M.** see Matoba Y. 1167
- Matsuo M.** see Nagasawa S. 1187
- Matsuo M.** see Nagasawa S. 1719
- Mattie D. R.** see Serve' 1667
- Maulshagen A.** see Theisen J. 881
- Maulshagen A.** see Theisen J. 881
- Maund S. J.** see Taylor E. J. 1375
- McDonald G. A.** see Serve' M. P. 1667
- McGill W. B.** see Xing B. 1311
- McGowan V.** see Murrell J. C. 1
- McKay W. A.** see Fletcher C. L. 1041
- McLachlan M. S.** see Hippelien M. 2255
- McPeters A. L.** see Zhong Y. 1263
- Meadows J.** Tillitt D., Huckins J. and Schroeder D.
Large-scale dialysis of sample lipids using a semipermeable membrane device 1993
- Méallier P.** Mamouni A. and Mansour M.
Photodegradation of pesticides - VII.
Photodegradation of carbetamide - photoproducts 1917
- Means J. L.** see Voudrias E. A. 1753
- Meylan W. M.** and Howard P. H.
Computer estimation of the atmospheric gas-phase reaction rate of organic compounds with hydroxyl radicals and ozone 2293
- Miller W. C.** see Ward G. M. 87
- Millette J. A.** see Raju G. S. 1429
- Mills E. L.** see Secor C. L. 1559
- Minero C.** Pelizzetti E., Malato S. and Bianco J.
Large solar plant photocatalytic water decontamination: degradation of pentachlorophenol 2103
- Mischer G.** see H.-Jones P. 1491
- Mitchell C.**
Methane emissions from the coal and natural gas industries in the UK 441
- Miyata H.** Aozasa O., Ohta S., Chang T. and Yasuda Y.
Estimated daily intakes of PCDDs, PCDFs and non-*ortho* coplanar PCBs via drinking water in Japan 1527
- Montoya E.** see Gonzalez Muñoz M. T. 1881
- Moraes F.** and Khalil M. A. K.
Permafrost methane content - II. Modeling theory and results 595
- Moraes F.** see Rasmussen R. A. 591
- Morita M.** see Hashimoto S. 2161
- Morrissey L. A.** Zobel D. B. and Livingston G. P.
Significance of stomatal

- control on methane release from *Carex*-dominated wetlands 339
- Mosler A. R.** see Ojima D. S. 675
- Mroz E. J.** Deuteromethanes: potential fingerprints of the sources of atmospheric methane 45
- Mroz E. J.** see Tie X. 769
- Muir D. C. G.** see Ford C. A. 1981
- Mulder P.** see Born J. G. P. 2087
- Mulvihill M. J.** see Ford C. A. 1981
- Murrell J. C.** McGowan V. and Cardy D. L. N. Detection of methylotrophic bacteria in natural samples by molecular probing techniques 1
- Nagasawa S.** Kikuchi R. and Matsuo M. Indirect identification of an unstable intermediate in γ -HCH degradation by *Pseudomonas paucimobilis* UT26 2279
- Nagasawa S.** Kikuchi R., Negata Y., Takagi M. and Matsuo M. Stereochemical analysis of γ -HCH degradation by *Pseudomonas paucimobilis* UT26 1187
- Nagasawa S.** Kikuchi R., Nagata Y., Takagi M. Y. and Matsuo M. Aerobic mineralization of γ -HCH by *Pseudomonas paucimobilis* UT26 1719
- Nagata Y.** see Nagasawa S. 1719
- Nagel R.** see Schafers C. 1641
- Narang A.** see Gierthy J. F. 1225
- Narang R.** see Gierthy J. F. 1225
- Negata Y.** see Nagasawa S. 1187
- Neue H. U.** see Bacheler D. 219
- Newsted J. L.** see Jones P. D. 1203
- Niessen H. J.** see H.-Jones P. 1491
- Nigg H. N.** Stamper J. H. and Mallory L. L. Quantification of human exposure to ethion using saliva 897
- Nigg H. N.** Stamper J. H. and Mallory L. L. Quantification of human exposure to ethion using saliva 897
- Nojima K. and Isogami C.** Studies on photochemical reactions of air pollutants - XI. Photochemical epoxidation of aldrin with various α -diketones in air 921
- Nojima K. and Isogami C.** Studies on photochemical reactions of air pollutants - XI. Photochemical epoxidation of aldrin with various α -diketones in air 921
- Norstrom R. J.** see Ford C. A. 1981
- Nozhevnikova A. N.** Lifshitz A. B., Lebedev V. S. and Zavarzin G. A. Emission of methane into the atmosphere from landfills in the former USSR 401
- Odsjö T.** see Sellström U. 1703
- Oechel W. C.** see Vourlitis G. L. 329
- Ohnishi J.** see Matoba Y. 1167
- Ohta S.** see Miyata H. 1527
- Ojima D. S.** Valentine D. W., Mosler A. R., Parton W. J. and Schimel D. S. Effect of land use change on methane oxidation in temperate forest and grassland soils 675
- Ok G.** Hanai Y. and Katou T. Decomposition of chlorinated dioxins, odorous compounds and NO_x from MSW incineration plant by oxidizing catalyst 2167
- Olie K.** see Pluim H. J. 1889
- Olie K.** see Pluim H. J. 1947
- Olsson M.** see Sellström U. 1703
- Overcash M. R.** see Zhong Y. 1263
- Paasivirta J.** see Särkkä J. 2147
- Pagan J. J.** see Zhang P.-C. 1213
- Palonen J.** see Halonen I. 1869
- Panayotidis P.** see Catsiki V. A. 963
- Panayotidis P.** see Catsiki V. A. 963
- Papen H.** see Wassmann R. 201
- Parashar D. C.** Gupta P. K., Rai J., Sharma R. C. and Singh N. Effect of soil temperature on methane emission from paddy fields 247
- Park J. H.** and Lee H. J. Estimation of bioconcentration factor in fish, adsorption coefficient for soils and sediments and interfacial tension with water for organic nonelectrolytes based on the linear solvation energy relationships 1905
- Parton W. J.** see Ojima D. S. 675
- Pascoe D.** see Taylor E. J. 1375
- Patel-Mandlik K. J.** see Manos C. G. 1537
- Patrick Jr W. H.** see Masscheleyen P. H. 251
- Peer R. L.** Thorneloe S. A. and Epperson D. L. A comparison of methods for estimating global methane emissions from landfills 387
- Peijenburg W. J. G. M.** see Stegeman M. H. L. 837
- Peijenburg W. J. G. M.** see Stegeman M. H. L. 837
- Pelther A.** see Lay J. P. 1137
- Pelizzetti E.** see Minero C. 2103
- Perez G.** Caponecchi G., Keheyian Y. and Lilla E. Gas phase naphthalene chlorination 2139
- Pérez J. L.** see Fernández M. A. 1085
- Perrin-Ganier C.** Schiavon M., Portal J. M., Breuzin C. and Babut M. Porous cups for pesticides monitoring in soil solution - laboratory tests 2231
- Persoone G.** see Calleja M. C. 2007
- Peterman P. H.** see Schwartz T. R. 1443
- Petrovic A. M.** Guttenmann W. H., Ebel J. G., Jr. and Lisk D. J. Leaching of mecoprop herbicide through turfgrass soils 1541
- Petrovic A. M.** Young R. G., Ebel J. G., Jr. and Lisk D. J. Conversion of triadimenol fungicide to triadimenol during leaching through turfgrass soils 1549
- Petit C.** see Halsall C. 2185
- Pham T.** Lum K. and Lemieux C. The occurrence, distribution and sources of DDT in the St. Lawrence River, Quebec (Canada) 1595
- Philip C.** see Funcke W. 2097
- Piccot S. D.** see Kirchgessner D. A. 23
- Piccot S. D.** see Kirchgessner D. A. 453
- Pieters H.** see Hendriks A. J. 817
- Pieters H.** see Hendriks A. J. 817
- Pifferi P. G.** see Setti L. 1151
- Pinal R.** see Yalkowsky S. H. 1239
- Pitea D.** Lasagni M., Bonati L. and Cosentino U. Estimation of the toxicity equivalents of PCDD/PCDF mixtures from combustion sources when specific congener information is lacking: preliminary results 1419
- Pleß T.** Schneider F., Steiner M. and Karraus W. Impact of body-mass-index and age on the blood-

- concentration of PCDD/PCDF of adults and children 1109
- Piulm H. J.** Kramer I., vanderSlikke J. W., Koppe J. G. and Olie K. Levels of PCDDs and PCDFs in human milk: dependence on several parameters and dietary habits 1889
- Piulm H. J.** Wever J., Koppe J. G., vdSlikke J. W. and Olie K. Intake and faecal excretion of chlorinated dioxins and dibenzofurans in breast-fed infants at different ages 1947
- Pohlant K.** Streckner M. and Marutzky R. Ash from the combustion of wood treated with inorganic wood preservatives: element composition and leaching 2121
- Portal J. M.** see Perrin-Ganier C. 2231
- Radhakrishnaiah K.** see Suresh A. 945
- Radhakrishnaiah K.** see Suresh A. 945
- Rai J.** see Parashar D. C. 247
- Raju G. S.** Millette J. A. and Khan S. U. Pollution potential of selected pesticides in soils 1429
- Ramamoorthy S.** and Clement R. Non-statistically-based scoring system to evaluate interlaboratory performance for the analysis of dioxins and furans in fish tissues 1679
- Rantio T.** see Särkkä J. 2147
- Rasmussen R. A.** see K. R. Smith 479
- Rasmussen R. A.** see Khalil M. A. K. 127
- Rasmussen R. A.** see Khalil M. A. K. 473
- Rasmussen R. A.** see Khalil M. A. K. 803
- Rasmussen R. A.** Khalil M. A. K. and Moraes F. Permafrost methane content - I. Experimental data from sites in Northern Alaska 591
- Rau J. A.** see Khalil M. A. K. 473
- Remmers J.** see Steele D. H. 907
- Remmers J.** see Steele D. H. 907
- Rennenberg H.** see Wassmann R. 201
- Rennenberg H.** see Martius C. 623
- Rexilius L.** see Rimkus G. 1099
- Rimkus G.** Rexilius L. Heldemann G., Vagts A. and Hedderich J. Results of an interlaboratory study on organochlorine compounds (PCB, DDT, DDE) in seal blubber (*Phoca vitulina*) 1099
- Rittmeyer C.** and Vehlow J. Decomposition of organohalogen compounds in municipal solid waste incineration plants -- I: chlorofluorocarbons 2129
- Roberts D. F.** see Chen P. H. 1743
- Roberts R. N.** see Zhang P.-C. 1213
- Rodriguez Gallego M.** see González Muñoz M. T. 1881
- Rontani J.-F.** and Acquaviva M. The aerobic bacterial metabolism of phytol in seawater: temperature dependence of an abiotic intermediate step and its consequences 1513
- Rouland C.** Brauman A., Labat M. and Lepage M. Nutritional factors affecting methane emission from termites 617
- Rusling J. F.** see Ul Haque I. 1301
- Ruuskanen J.** see Juuti S. 1859
- Ruuskanen J.** see Halonen I. 1869
- Ruuskanen J.** see Kopponen P. 1499
- Safferden S. I.** see Baud-Grosset F. 1365
- Saito H.** Koyasu J., Yoshida K., Shigeoka T. and Kolke S. Cytotoxicity of 109 chemicals to goldfish GFS cells and relationships with 1-octanol/water partition coefficients 1015
- Saito H.** Koyasu J., Yoshida K., Shigeoka T. and Kolke S. Cytotoxicity of 109 chemicals to goldfish GFS cells and relationships with 1-octanol/water partition coefficients 1015
- Särkkä J.** Paasivirta J., Hässinen E., Kolstinen J., Manninen P., Mäntykoski K., Rantio T. and Welling L. Organic chlorine compounds in lake sediments -- VI. Two bottom sites of Lake Ladoga near pulp mills 2147
- Sawyer T. W.** and Weiss M. T. Bioanalysis of organophosphate nerve agents in soil samples 2023
- Schafers C.** and Nagel R. Toxicity of 3,4-dichloroaniline to perch (*perca fluviatilis*) in acute and early life stage exposures 1641
- Scherrer M.-C.** see H.-Jones P. 1491
- Scheunert I.** see Schroll R. 1631
- Schiavon M.** see Perrin-Ganier C. 2231
- Schmelz D. S.** see Ojima D. S. 675
- Schlesinger M. E.** see Andronova N. G. 657
- Schmidt M.** see Thom M. 143
- Schmidt S.** see Lambert G. 579
- Schneider F.** see Pieß T. 1109
- Schneider S.** see Hashimoto S. 2161
- Scholz-Böttcher B.** see Wichmann H. 1159
- Schön N.** see Grein H. 1653
- Schroeder D.** see Meadows J. 1993
- Schroll R.** and Scheunert I. Uptake pathways of octachlorodibenzo-p-dioxin from soil by carrots 1631
- Schupp M.** Bergamaschi P., Harris G. W. and Crutzen P. J. Development of a tunable diode laser absorption spectrometer for measurements of the $^{13}\text{C}/^{12}\text{C}$ ratio in methane 13
- Schwartz T. R.** Tillitt D. E., Feltz K. P. and Peterman P. H. Determination of mono- and non- α,α' -chlorine substituted polychlorinated biphenyls in Aroclors and environmental samples 1443
- Scrudato R. J.** see Zhang P.-C. 1213
- Secor C. L.** Mills E. L., Harshbarger J., Kuntz H. T., Gutermann W. H. and Lisk D. J. Bioaccumulation of toxicants, element and nutrient composition, and soft tissue histology of zebra mussels (*Dreissena polymorpha*) from New York State waters 1559
- Seiler W.** see Martius C. 623
- Seinen W.** see Belfroid A. 2265
- SELLSTRÖM U.** Jansson B., Klerkegaard C. A. deWit C., Odajö T. and Olsson M. Polybrominated diphenyl ethers (PBDE) in biological samples from the Swedish environment 1703
- Serve' M. P.** Bombick D. D., Clemens J. M., McDonald G. A., Hixson C. J. and Mattie D. R. The metabolism of 3-methylheptane in male 344 Fischer rats 1667
- Setti L.** Lanzarini G., Pifferi P. G. and Spagna G. Further research into the aerobic degradation of α -alkanes in a heavy oil by a pure culture of a *Pseudomonas* sp. 1151
- Sharma R. C.** see Parashar D. C. 247

- Shearer M. J.** see Khalil M. A. K. 127
- Shearer M. J.** see Khalil M. A. K. 473
- Sherry J. P. and Borgmann A.** Enzyme-immunoassay techniques for the detection of atrazine in water samples: evaluation of a commercial tube based assay 2173
- Shigeoka T.** see Saito H. 1015
- Shigeoka T.** see Saito H. 1015
- Simmons J. A.** see Yavitt J. B. 721
- Simon H.** see Först C. 1355
- Simon M.** see Ford C. A. 1981
- Singh N.** see Parashar D. C. 247
- Siré E.-O.** see Streit B. 1031
- Sivaramakrishna B.** see Suresh A. 945
- Sivaramakrishna B.** see Suresh A. 945
- Smith K. R. Khalil M. A. K.** Rasmussen R. A. Thorneloe S. A. Manegdeg F. and Apte M. Greenhouse gases from biomass and fossil fuel stoves in developing countries: a manila pilot study 479
- Spagna G.** see Setti L. 1151
- Spokas K.** see Bogner J. 369
- Stamper J. H.** see Nigg H. N. 897
- Stamper J. H.** see Nigg H. N. 897
- Steele D. H. and Remmers J.** Lattice-layer materials for column chromatography in dioxin methods 907
- Steele D. H. and Remmers J.** Lattice-layer materials for column chromatography in dioxin methods 907
- Stegeman M. H. L. Peijenborg W. J. G. M. and Verboom H.** A quantitative structure-activity relationship for the direct photolytic hydrolysis of meta-substituted halobenzene derivatives in water 837
- Stegeman M. H. L. Peijenborg W. J. G. M. and Verboom H.** A quantitative structure-activity relationship for the direct photolytic hydrolysis of meta-substituted halobenzene derivatives in water 837
- Steiner M.** see Pleß T. 1109
- Stieglitz L.** see Först C. 1355
- Strecker M.** see Pohlandt K. 2121
- Streit B. and Siré E.-O.** On the role of blood proteins for uptake, distribution, and clearance of waterborne lipophilic xenobiotics by fish: a linear system analysis 1031
- Streit B. and Winter S.** Cadmium uptake and compartmental time characteristics in the freshwater mussel *Anodonta anatina* 1479
- Striegl R. G.** Diffusional limits to the consumption of atmospheric methane by soils 715
- Strong C. J. N.** see deBoer J. 1823
- Stropp G.** see Greim H. 1653
- Strotmann U. J. Elsmann F.** Hauth B. and Bias W. R. An integrated test strategy for the assessment of anaerobic biodegradability of wastewaters 2241
- Strotmann U. J. Weberruß U.** and Bias W. R. Degradation of morpholine in several biodegradation tests and in wastewater treatment plants 1729
- Suresh A. Sivaramakrishna B.** and Radhakrishnaiah K. Patterns of cadmium accumulation in the organs of fry and fingerlings of freshwater fish *Cyprinus carpio* following cadmium exposure 945
- Suresh A. Sivaramakrishna B.** and Radhakrishnaiah K. Patterns of cadmium accumulation in the organs of fry and fingerlings of freshwater fish *Cyprinus carpio* following cadmium exposure 945
- Swami K.** see Gierthy J. F. 1225
- Takagi M.** see Nagasawa S. 1187
- Takagi M.** see Nagasawa S. 1719
- Tarhanen J.** see Juuti S. 1859
- Tarhanen J.** see Halonen I. 1869
- Tarhanen J.** see Kopponen P. 1499
- Taylor E. J. Jones D. P. W.** Maund S. J. and Pascoe D. A new method for measuring the feeding activity of *Gammarellus pulex* (L.) 1375
- Theilen U.** see Martius C. 623
- Theisen J. Maulshagen A. and Fuchs J.** Organic and inorganic substances in the copper slag "Kieselrot" 881
- Theisen J. Maulshagen A. and Fuchs J.** Organic and inorganic substances in the copper slag "Kieselrot" 881
- Theisen J.** see König J. 851
- Theisen J.** see König J. 851
- Thom M. Bössinger R.** Schmidt M. and Levin I. The regional budget of atmospheric methane of a highly populated area 143
- Thorneloe S. A.** see Peer R. L. 387
- Thorneloe S. A.** see K. R. Smith 479
- Thumm W.** see Yu-yum T. 955
- Thumm W.** see Yu-yum T. 955
- Tie X. and Mroz E. J.** The potential changes of methane due to an assumed increased use of natural gas: a global three-dimensional model study 769
- Tillitt D.** see Meadows J. 1993
- Tillitt D. E.** see Jones P. D. 1203
- Tillitt D. E.** see Schwartz T. R. 1443
- Tillitt D. E. Kublak T. J.** Ankley G. T. and Giesey J. P. Dioxin-like toxic potency in Forster's tern eggs from Green Bay, Lake Michigan, North America 2079
- Toprak H.** Methane emissions originating from the anaerobic waste stabilization ponds case study: Izmir wastewater treatment system 633
- Torn M. S. and Chapin III F. S.** Environmental and biotic controls over methane flux from Arctic tundra 357
- Törnronen R.** see Kopponen P. 1499
- Træsg W. A.** see deBoer J. 1823
- Trapp D.** see Levin I. 161
- Tsuda T. Aoki S. Kojima M.** and Fujita T. Accumulation and excretion of chloroanilines by carp 2301
- Tyle H.** see Chen F. 1325
- UlHaque I. and Rusling J. F.** Photodegradation of 4-chlorophenol to carbon dioxide and HCl using high surface area titanium dioxide anodes 1301
- Vagt A.** see Rinkus G. 1099
- Valentine D. W.** see Ojima D. S. 675
- VanAusdale W. A.** see Chen P. H. 1743
- vanderMeer J.** see deBoer J. 1823
- vanderSlikke J. W.** see Pluim H. J. 1889
- vanGestel K.** see Belfroid A. 2265
- Vasconcelos G.** see Grabowski J. 1003
- Vasconcelos G.** see Grabowski J. 1003
- vdSlikke J. W.** see Pluim H. J. 1947
- Vehlow J.** see Rittmeyer C. 2129
- Verboom H.** see Stegeman M. H. L. 837
- Verboom H.** see Stegeman M. H. L. 837
- Verbrugge D. A.** see Jones P. D. 1203

- Vetter W.**
Toxaphene. Theoretical aspects of the distribution of chlorinated boranes including symmetrical aspects 1079
- Vilokki H.** see Halonen I. 1869
- Vogel R.** see Greim H. 1653
- Voudrias E. A. and Means J. L.**
Sorption of uranium by brine-saturated halite, mudstone and carbonate minerals 1753
- Vourlitis G. L., Oechel W. C., Hastings S. J. and Jenkins M. A.**
The effect of soil moisture and thaw depth on CH₄ flux from wet coastal tundra ecosystems on the north slope of Alaska 329
- Wagner J. C.** see Green A. E. S. 2039
- Wang L.** see Zhao Y. 1971
- Ward G. M., Doxtader K. G., Miller W. C. and Johnson D. E.**
Effects of intensification of agricultural practices on emission of greenhouse gases 87
- Ward G. M.** see Lodman D. W. 189
- Wassmann R., Papen H. and Rennenberg H.**
Methane emission from rice paddies and possible mitigation strategies 201
- Wassmann R.** see Martius C. 623
- Weber J. H.**
Review of possible paths for abiotic methylation of mercury(II) in the aquatic environment 2063
- Weberruß U.** see Strotmann U. J. 1729
- Weiss K.** see Lay J. P. 1137
- Weiss M. T.** see Sawyer T. W. 2023
- Weiling L.** see Särkkä J. 2147
- Weiter G.** see Greim H. 1653
- Westermann P.**
Temperature regulation of methanogenesis in wetlands 321
- Wever J.** see Pluim H. J. 1947
- Wichmann H., Zelinski V., Scholz-Böttcher B., Lorenz W. and Bahadir M.**
Sampling strategy to investigate the distribution behaviour of low volatile pollutants like "dioxins" during vehicle fires in traffic tunnels 1159
- Williams D. J.**
Methane emissions from manure of free-range dairy cows 179
- Winkler J. D.** see Kirchgessner D. A. 453
- Winter S.** see Streit B. 1479
- Xing B., McGill W. B., Dudas M. J., Hepler L. G. and Dobrogowska C.**
Thermodynamic parameters for pentachlorophenol sorption on montmorillonite in aqueous suspensions 1311
- Yalkowsky S. H. and Pinal R.**
Estimation of the aqueous solubility of complex organic compounds 1239
- Yasuda Y.** see Miyata H. 1527
- Yasuhara A.**
A monitoring system for chlorinated benzenes in exhaust gas from waste incinerators 1071
- Yasuhara A.**
Thermal decomposition of tetrachloroethylene 1507
- Yavitt J. B., Simmons J. A. and Fahey T. J.**
Methane fluxes in a northern hardwood forest ecosystem in relation to acid precipitation 721
- Yoshida K.** see Saito H. 1015
- Yoshida K.** see Saito H. 1015
- Young R. G.** see Petrovic A. M. 1549
- Yu-yun T., Jobellus-Korte, M., Thumm W., Attar A., Freitag D. and Kettrup A.**
Fate of two phenylbenzoylurea insecticides in an algal culture system (*Scenedesmus subspicatus*) 955
- Yu-yun T., Jobellus-Korte, M., Thumm W., Attar A., Freitag D. and Kettrup A.**
Fate of two phenylbenzoylurea insecticides in an algal culture system (*Scenedesmus subspicatus*) 955
- Zanin G., Borin M., Altissimo L. and Calamari D.**
Simulation of herbicide contamination of the aquifer north of Vicenza (North-East Italy) 929
- Zanin G., Borin M., Altissimo L. and Calamari D.**
Simulation of herbicide contamination of the aquifer north of Vicenza (North-East Italy) 929
- Zavarzin G. A.** see Nozhevnikova A. N. 401
- Zelinski V.** see Wichmann H. 1159
- Zhang P.-C., Scrudato R. J., Pagano J. J. and Roberts R. N.**
Photodecomposition of PCBs in aqueous systems using TiO₂ as catalyst 1213
- Zhang Z.** see Zhao Y. 1971
- Zhao Y., Wang L., Gao H. and Zhang Z.**
Quantitative structure - activity relationships - relationship between toxicity of organic chemicals to fish and to photobacterium phosphoreum 1971
- Zhong Y., Overcash M. R. and McPeters A. L.**
Near sunlight zone model for photodegradation of TCDD in soils containing organic solvents 1263
- Zimmerman P.** see Lodman D. W. 189
- Zobel D. B.** see Morrissey L. A. 339



Did you know that if you are a
contributor to any of
Pergamon's Books or Journals
you are entitled to

30%
Discount on all
Pergamon Books?

(except multi-volume reference works)

Contact your nearest Pergamon office in
order to obtain a subject catalogue



Pergamon Press

Pergamon Press Ltd, Headington Hill Hall, Oxford, OX3 0BW, UK
Pergamon Press Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA
A member of the Elsevier Science Publishing Group

AIMS AND SCOPE

Chemosphere is an international journal designed for the rapid publication of original and important communications as well as review articles in English. *Chemosphere*, as a multi-disciplinary journal, offers maximum dissemination of investigations related to the health and safety of every aspect of life. Environmental protection encompasses a very wide field and relies on scientific research in chemistry, biology, physics, toxicology and inter-related disciplines. Three types of communication will be published.

1. Original communications describing important new discoveries or further developments in important fields of investigation related to the environment and human health.
2. Invited reviews, critical but non-polemical; mainly of new rapidly developing areas of environmental protection.
3. A special information and news section will provide current information on books, meetings, industrial practices and government decisions.

Scientific investigations in any of the following main topics will be considered for publication.

THE NATURAL ENVIRONMENT. Biological, chemical and physical studies designed to control or to prevent pollution of the air, waterways, sea and land.

METEOROLOGY AND CLIMATE. As they affect life processes and living entities. The interaction between meteorological and climatic factors and environmental pollutants and their effect on life.

ENVIRONMENTAL CHEMICALS AND ANALYSIS. Analysis and monitoring levels of chemicals in the environment. Composition of industrial products, production and synthesis of chemicals and their properties. Origin and routes into the environment.

AIR AND WATER POLLUTION, WASTE TREATMENT. This includes the release of pollutants during incineration or composting and the control of effluents or their interaction with ecosystems.

ENVIRONMENTAL FATE OF CHEMICALS. Transport routes in air and water, evaporation, adsorption, sedimentation, microbial degradation, animal and plant metabolism, environmental changes to compounds due to light, moisture and chemical interaction with natural substances, or additives to the environment.

PHARMACODYNAMICS — BIOACCUMULATION — METABOLISM. Uptake, accumulation, food web biomagnification, metabolic products and pathways, excretion, biological half-life.

EFFECTS ON MAN. Toxic and other undesirable effects on humans, animals and test systems used to predict human toxicity, e.g. LD₅₀ carcinogenesis tests, Ames tests and other *in vitro* systems; pharmacological and other sublethal effects, the interaction of chemicals with infectious diseases, etc.

OCCUPATIONAL HAZARDS AND EXPOSURE. *Chemosphere* is concerned with safety and protection in relation to spills and accidents as well as the interaction of all classes of chemicals with the environment.

ECOTOXICOLOGY. Effects of chemicals and physical agents on populations and communities of microorganisms, plants, animals and man.

ATMOSPHERIC CHEMISTRY AND GLOBAL CHANGE. This section will publish theoretical and experimental papers on urban, regional and global chemistry, including all aspects of past and present changes in atmospheric chemistry and climate caused by natural processes or anthropogenic activities. The main emphasis will be on global atmospheric chemistry of trace constituents, and the effect of human activities on the Earth's atmosphere, climate and habitability.

INSTRUCTIONS TO CONTRIBUTORS FOR THE PREPARATION OF MANUSCRIPTS FOR PHOTO-OFFSET REPRODUCTION

1. Drafts of manuscripts in English only may be submitted *in duplicate* to the Editor-in-Chief or any of the Editors, all of whom are listed on the inside front cover of the Journal. However, for papers submitted to the section on *Atmospheric Chemistry and Global Change*, all must be sent to Dr. Khalil, the Editor for this section. Authors are reminded to retain a duplicate copy of their paper.

2. Manuscript drafts may be produced on any size of paper. However, after the refereeing process, final revised manuscripts should adhere to the following rules:

(a) The area typed should be 195 × 275 mm.

(b) The font should be Times Roman or equivalent, of size 12 point. It should be noted that, *when reproduced*, the manuscript will be reduced to 75% of its original size.

(c) Black ink must be used (since blue cannot be reproduced with clarity) on good quality, white paper.

(d) Spacing of 1½ between lines should be used (*not single spacing*).

(e) The text of each paper *must* begin with a short *Abstract* (preferably not longer than 100 words).

(f) Finally, special laysheets (Crown Quarto, 75%) may be obtained on request from Pergamon Press (Oxford, U.K.). Manuscripts may be typed directly on to these, with figures/tables inserted where required.

3. *Layout* — the title of each article should be in capital letters, centred on the first page, with the authors' names below, followed by their addresses. There should be clear spacing of at least 1 cm both above and below each of these units. The author(s) to whom correspondence should be addressed should be clearly indicated (e.g. by an asterisk or underlining).

4. *Illustrations* — figures, tables, formulae or any other illustrations should be included within the body of the text where necessary. As noted above, both text and illustrations will be reduced to 75% of the original upon reproduction, so authors should check that everything will be legible after reduction.

Figures may be inserted as black and white glossy photographs or black line drawings at the authors' discretion. They should be pasted on, rather than taped, since the latter results in unclear edges upon reproduction.

Original figures will only be returned to the authors upon request to the Publisher within 1 month of publication. Otherwise they will be discarded.

5. Each page should be numbered clearly (preferably on the back) in *light blue* or *yellow* crayon (neither of which reproduce photographically). Ink or dark colours should *not* be used for this purpose.

Reprints

Owing to the short production time for articles in this journal, it is essential to indicate the number of reprints required *when submitting the manuscript*. Confirmation of each order will accompany the notification of acceptance. Reprint orders received later than the manuscript cannot be executed until printing of the issue concerned has been completed, and a price quotation will be supplied.

Whilst every effort is made by the publishers and editorial board to see that no inaccurate or misleading data, opinion or statement appear in this journal, they wish to make it clear that the data and opinions appearing in the articles and advertisements herein are the sole responsibility of the contributor or advertiser concerned. Accordingly, the publishers, editorial board and editors and their respective employees, officers and agents accept no responsibility or liability whatsoever for the consequences of any such inaccurate or misleading data, opinion or statement.

